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CATALOGUE OF THE MARSUPIALIA FROM NEW GUINEA, THE MOLUCCAS AND CELEBES IN THE MUSEO CIVICO DI STORIA NATURALE « GIACOMO DORIA » IN GENOA

INTRODUCTION

« The Malay Archipelago » by Alfred Russel Wallace, issued for the first time in February 1869, directed the attention of naturalists all over the world, more than ever before, to the peculiar fauna and flora of Celebes, the Moluccas and New Guinea. In the next years private individuals in Genoa provided the financial means for geographical, ethnological and biological investigations in that part of the world. During the years 1872-'75 the botanist Dr. Odoardo Beccari visited these islands. In the beginning he was accompanied by the ethnologist and zoologist Luigi Maria D'Albertis, who later on travelled alone in New Guinea, until 1877. Both sent their zoological collections to the Museo Civico in Genoa. Visiting Ternate, Beccari met the Dutch merchant Mr. A. A. Bruijn, who dealt in skins of birds of paradise and other natural products from New Guinea, and who, on the instigation of Beccari, now induced his hunters to collect mammals also, which he presented to the Museo Civico. The joint publication by Dr. PETERS, director of the zoological museum in Berlin, and the Marquis DORIA, director of the Museo Civico in Genoa, « Enumerazione dei mammiferi » etc., issued in 1881, is, in fact, an illustrated catalogue of the collections made by Beccari, D'Albertis and Bruijn.

The collection attracted the attention of OLDFIELD THOMAS then preparing the catalogue of Marsupialia and Monotremata in the British Museum, London. From many entries in this catalogue (1888) it is clear that the Author studied intensively the Genoa collection. This handbook, dealing equally with skin, skull and teeth, and based on personal observation, is still indispensable for every student of Marsupialia.

During the years 1888-'93 the geographer and zoologist Lamberto Loria travelled in Papua, collecting mammals and birds and sending them

to the Museo Civico. New species of marsupials among these new acquisitions were described by OLDFIELD THOMAS 1897-'99 (types in Genoa and London).

During the 20th century the collection of marsupials from New Guinea in Genoa was not enlarged. Several museum labels prove that the curator, later director Dr. de Beaux took a keen interest in this group, but he did not publish on it. G.M.M. TATE studied the collection eagerly but rather quickly during a visit in May 1937, and afterwards with the aid of photographs. Many remarks in his publications 1945-'48 refer to specimens in Genoa.

During a short stay in Genoa in the autumn of 1960 I had the opportunity to study the important collection, which was in excellent condition and had suffered no loss during World War II. I am indebted to the Director and the scientific and technical staff of the Museo Civico for all the kind and efficient help they gave me. I also had the great advantage of being able to consult the rich, old library of the Museum. Revising the collection I met with several taxonomic problems which I could not solve, having at that moment no material from other collections for comparison at my disposal. Offering nevertheless a formal catalogue of the whole collection, I hope to make it more easily accessible for later students, leaving to them the opportunity of solving the problems which remain.

The order of the genera is according to LAURIE & HILL, 1954. In the arrangement of the species within a genus I have more or less followed TATE's revisions.

The synonymy is recorded only so far as is necessary for the understanding of the names on the labels and in the papers referring to the present collection.

c(atalogo) E(ntrate) = Registro progressivo delle entrate (Register of numbered specimens in the museum).

The month in which a specimen was collected is, as far as recorded on the label or in the literature, indicated as I-XII.

Several localities in Papua (then British New Guinea) do not occur on current atlas maps. In such cases I have added latitude and longitude, from large scale maps or from the useful gazetteer in LAURIE & HILL, l.c. p. 139-159. I thought this superfluous for islands and other localities that can be found in nearly every atlas. Vogelkop is the well-known northwestern peninsula of Netherlands New Guinea.

Some specimens were first preserved in alcohol. In 1937, obviously after TATE's visit to the Museum, they were measured by (or at least under the responsibility of) the director De Beaux, and thereupon they were skinned and the skull was cleaned. These measurements, in millimeters, are recorded on the labels and in the present catalogue. By checking the measurement of the hind foot of the dry skin I concluded that the recorded length of the hind foot does not include the claws.

For biographical data and itineraries of the collectors Odoardo Beccari (1843-1920), Luigi Maria D'Albertis (1841-1901), A.A. Bruijn, and Lamberto Loria (1855-1913), I refer to: Beccari, 1924; D'Albertis, 1880; Loria, 1890; Wichmann II; Van Steenis, 1955. On Oscar de Beaux (1879-1955) see TORTONESE, 1956.

I - FAMILY DASYURIDAE

1. *Murexia longicaudata* (Schlegel)

SCHLEGEL, 1866, p. 356-357: *Phascogale longicaudata* n. sp., Aru Is.

THOMAS, 1887b, p. 509-510; 1888, p. 293-294: *Phascologale longicaudata*, Aru Is.

THOMAS, 1897b, p. 621: *Phascologale longicaudata*, ♀ Haveri, 9°22' S 147°32' E, Papua, 8 XI 1893, leg. Loria, then in the Genoa Museum. First record of this species from the mainland of New Guinea! TATE, 1947, p. 117, after his visit to the Genoa Museum in 1937, cited THOMAS' record, but did not, as usual, mention any specimen in the collection. Nor did I see it in 1960. Perhaps it was overlooked (in alcohol?).

TATE & ARCHBOLD, 1937, p. 335: *Murexia* n. subg., type species *Phascogale murex* Thomas.

TATE, 1947, p. 116: *Murexia longicaudata*. The occurrence of the species in New Guinea was confirmed.

LAURIE & HILL, 1954, p. 5: *Murexia longicaudata*.

2. *Antechinus melanurus* (Thomas)

MACLEAY, 1841, p. 242: *Antechinus stuartii* n.g.n.sp. = *Phascogale flavipes* Waterhouse, 1837, Australia.

THOMAS, 1887b, p. 502; 1888, p. 273, included *Antechinus* in *Phascologale*.

THOMAS, 1899, p. 191-192: *Phascogale melanura* n. sp., ♂ and ♀, Moroka, Papua, leg. Loria. « Of the two cotypes Dr. Gestro (director of the Genoa Museum) has been good enough to cede the ♂ to the British Museum, the ♀ remaining in the Museo Civico ». (Cf. 3915).

TATE, 1947, p. 129: *Antechinus melanurus*. Genoa C.E. 3915 ♀ adult, and British Museum O. 6.26.1 ♂ adult are recorded as « cotypes ».

LAURIE & HILL, 1954, p. 6: *Antechinus melanurus*.

C.E. 3915 skin and skull, ♀, Moroka, 9°24' S 147°32' E, Papua (1300 m), IX/X-1893, leg. Loria. Until 1937 in alcohol with the measurements head and body 105, tail 130, ear 13, hind foot 19. Originally a syntype. THOMAS, 1899, published, in the Annali of this Museum, the external measurements of both syntypes; the published measurements of the skull, however, referred only to the ♀, now in Genoa. The original information on this specimen C.E. 3915, therefore, is the most complete, and I designate it as the lectotype.

3. *Phascolosorex dorsalis* (Peters & Doria)

PETERS & DORIA, 1876, p. 335: *Phascologale dorsalis* n. sp., Mt Arfak, Vogelkop, leg. Beccari.

PETERS & DORIA, 1881, p. 667, col. pl. 7 (animal ♂ and ♀): *Phascologale* (*Chaetocercus*) *dorsalis*.

THOMAS, 1887b, p. 506: *Phascologale dorsalis*; recorded two « co-types » in the Genoa Museum: ♂ and ♀, Hatam, Arfak Mts, VI 1875, leg. Beccari.

THOMAS, 1887c, p. 447, described and figured (pl. 27 f. 7) an extra superior premolar on the left side in a skull of *Phascologale dorsalis*, at that time belonging to the Genoa Museum.

THOMAS, 1888, p. 283, pl. 24 f. 6 (skull), pl. 25 f. 2 (dentition): *Phascologale dorsalis*. In British Museum: ♀, Hatam, Mt Arfak, VI 1875, leg. Beccari, « co-type » of species, received in exchange from Genoa Museum. Other « co-types » in Genoa and Berlin Museums. In British Museum still another specimen, ♂, Arfak Mt, leg. Bruijn.

MATSCHIE, 1916, p. 263: *Phascolosorex* n. subg., type species *Phascologale dorsalis*.

TATE, 1947, p. 138: *Phascolosorex dorsalis dorsalis*.

LAURIE & HILL, 1954, p. 8: *Phascolosorex dorsalis dorsalis*.

C.E. 3916 skin and skull, ♂ adult, Hatam, 1°09' S 134°00' E, Arfak Mts, Vogelkop, VI 1875, leg. Beccari. Pelage of the rear parts of back and flanks badly damaged (this is probably the reason why in pl. 7, PETERS & DORIA, 1881, the ♂ is in the background with its damaged parts hidden behind the ♀). TATE, 1947, p. 138, recorded only this specimen (C.E. 3916) as « type » of the (sub) species. I regard this as definite designation of a lectotype, and I agree with it.

4. *Phascolosorex doriae* (Thomas)

THOMAS, 1886, p. 208: *Phascologale doriae* n. sp., ♀ adult, Mt Arfak, legg. Beccari & Bruijn.

THOMAS, 1887b, p. 507: *Phascologale doriae*. In the Genoa Museum two « co-types » of the species: ♀ adult, Mt Arfak, leg. Beccari, and ♀ immature, Mori, Arfak Mt, 13 VIII 1875, leg. Beccari.

THOMAS, 1888, p. 282-283: *Phascologale doriae*. « Co-types » in Genoa and in British Museum. The latter specimen is ♂ (sic), immature skin and skull, 13 V 1875, Mori, Mt Arfak, leg. Beccari, received in exchange from Genoa Museum. Measurements of skin (p. 283) and skull (p. 299) of the adult ♀ in Genoa Museum. (Mori village east of Hatam, cf. Wichmann II p. 127).

TATE, 1947, p. 138: *Phascolosorex doriae*, recorded as « cotypes » Genoa C.E. 3907 skin, 589 skull, young ♀, and British Museum 87.8.17.5, juvenile ♂.

LAURIE & HILL, 1954, p. 8: *Phascolosorex doriae*.

C.E. 3907 skin, 589 skull, ♀ nearly adult, Arfak Mts, 1°09' S 134°00' E, V 1875, coll. Bruijn N. 8. Until 1937 in alcohol with the measurements head and body 148, tail 147 circa, ear 17, hind foot 33. Considering that this was the only (young) adult specimen that served THOMAS for his publication of the new species in 1886, and again in 1887 and 1888, I designate this specimen as the lectotype. The specimen in the British Museum (juvenile ♀ according to THOMAS, 1887b, ♂ according to THOMAS, 1888, and TATE, 1947) remains the only paralectotype. It is useful to compare Beccari's itinerary about date and collector. November 1874,

in Ternate, Beccari met for the first time the Dutch mercator sapiens A.A. Bruijn, ancient officer of the Royal Netherlands Navy. Mr Bruijn was in regular contact with New Guinea through local agents and hunters, and Beccari proposed him to send zoological items to the Genoa Museum. A rich collection from New Guinea presented by Mr Bruijn, was received in Genoa already before 13 VI 1875 (the date of PETERS's publication 1875). In May 1875 Beccari was sailing and visiting islands in the Geelvink Bay. 2 VI he arrived in Dorei (now Manokwari) and stayed 16 VI until 6 VII in Hatam, 1520 m, in the Arfak Mts, with excursions in the neighbourhood up to 2042 m. 18 VII he left the Dorei Bay by boat, and was in Ternate again 4 VIII until 11 XI 1875. Beccari, therefore, cannot have collected himself in the Arfak Mts either in May or in August 1875, as THOMAS ll.cc. suggests. Most probably the above mentioned specimens from the Arfak Mts were collected by Bruijn's hunters.

5A. *Myoictis melas melas* (Müller)

- MÜLLER, [1840, p. 20; 1843, pl. 25 f. 1 (animal), f. 2-3 (skull); 1845, p. 149-152; dates from HUSSON, 1955, p. 287, cf. HUSSON & HOLTHUIS, 1955]: *Phascogalea melas* n. sp., neighbourhood of Mt Lamantsjieri, 3°42' S 134°09' E, Triton Bay.
- GRAY, 1858, p. 111-113, f. 1-4 (skull), col. pl. 64 (animal): *Myoictis wallacii* n. g. n. sp., Aru Is, A.R. Wallace leg. Cf. below 5 B.
- SCHLEGEL, 1866, p. 257-258: *Phascogalea thorbeckiana* n. sp., Salawati I. « Dentition just like that of *Phascogalea melas* ».
- KREFFT, 1866, p. 431-435; pl. 36 (animal): *Chaetocercus cristicauda* n.g.n.sp., South Australia.
- PETERS, 1875, p. 420: *Chaetocercus Bruijnii* n. sp., Andai, east side Vogelkop, leg. Bruijn. Holotype C.E. 590.
- PETERS & DORIA, 1881, p. 667, col. pl. 5 (animal), pl. 6 f. 1-4 (skull): *Phascologale* (*Chaetocercus*) *Thorbeckiana*, synonym *Chaetocercus Bruijnii*. Mr Bruijn's hunters had collected specimens for the Genoa Museum in Andai and in Salawati I., Beccari did so in Andai and in Ansus, Japen I. All collected specimens were males.
- THOMAS, 1887b, p. 505: *Phascologale thorbeckiana*. The name *melas* is recognized as a senior synonym but is rejected because it means

black and is appropriate for melanistic specimens, like the type was, but not for normal specimens. (Under the Code, 1961, Art. 18a, however, inappropriateness is no sufficient reason for the rejection of a name.) Four specimens were recorded in the Genoa Museum:

- a. ♀ adult, in alcohol, Salawati I., leg. Bruijn. (Cf. THOMAS, 1888)
- b. ♂ adult, skinned, Andai, leg. Bruijn, type of *Chaetocercus Bruijnii* Peters (Cf. below c.e. 590)
- c. ♂ adult, in alcohol, Andai, leg. Beccari (Cf. below c.e. 3904)
- d. ♂ adult, in alcohol, Ansus, Jobi I., leg. Beccari (Cf. below 3926 and 588).

THOMAS, 1888, p. 278-280: *Phascogale thorbeckiana*. The name *melas* is rejected for the reason cited above. The measurements of an adult ♂ in the Genoa Museum are recorded. Specimen b in the British Museum, ♀ adult in alcohol, Salawati I., VI 1875, leg. Bruijn, was received in exchange from the Genoa Museum.

TATE, 1947, p. 140; *Myoictis melas melas*, records Genoa Museum c.e. 590 and 3904, Andai, leg. Beccari, both as « cotypes » of *Phascogale* (read: *Chaetocercus*) *bruijnii*; in fact 590 leg. Bruijn is the holotype, and 3904 leg. Beccari a topotype (cf. below).

LAURIE & HILL, 1954, p. 8-9: *Myoictis melas melas*.

c.e. 590 skin (pelage badly damaged) and parts of skull (facial part of calvarium with complete dentition, mandibulae), Andai, 1874, collected by Bruijn's hunters and presented by him to Beccari. Holotype of *Chaetocercus Bruinii* Peters, 1875. Andai, 0°51' S 134°01' E, is situated on the east coast of Vogelkop, west coast of Geelvink Bay, south of Manokwari (TATE, 1947, p. 140; LAURIE & HILL, p. 8: « Andai on the east side of Geelvink Bay »).

c.e. 3904 skin and skull, pelage partly damaged, ♂, Andai, VII 1875, leg. Beccari. Until 1937 in alcohol with the measurements head and body 470 circa, tail 142, ear 21, hind foot 34. Cf. PETERS & DORIA, 1881. Mentioned by TATE l.c. as « cotype » with c.e. 590. It is, however, merely a topotype as PETERS dated his diagnosis Berlin, 13 VI 1875. Cf. THOMAS, 1887, p. 505 specimen c.

c.e. 3926 skin, pelage partly damaged, 588 skull, ♂, Ansus near south coast of Japen I., 1°43' S, 135°48' E, IV 1875, leg. Beccari. Until

1937 in alcohol with the measurements head and body 210 circa, tail 191, ear 21, hind foot 42. Cf. PETERS & DORIA, 1881; THOMAS, 1887, p. 505, specimen d.

5 B. *Myoictis melas wallacii* Gray

GRAY, 1858b, p. 111-113, f. 1-4 (skull), col. pl. 64 (animal): *Myoictis Wallacii* n.g.n.sp., Aru Is, leg. A.R. Wallace. It was then general usage in Universities to latinize a name like Wallace into Wallacius. The specific name is correctly formed, and I see no sufficient reason for emendation, except the replacement of the majuscule by a minuscule.

PETERS & DORIA, 1881, p. 668-670: *Phascologale (Chaetocercus) pilicauda* n. sp., based on two syntypes, both ♀, Fly River, Papua, D'Albertis

THOMAS, 1887, p. 505-506: *Phascologale wallacei* with *pilicaudata* (sic) as junior synonym. Two specimens in Genoa Museum: a. adult ♀, in alcohol, Fly River, leg. D'Albertis, « type of *Ph. pilicauda* » (I regard this as designation of a lectotype v.d.F.) b. ♂ adult, in alcohol, Katau, leg. D'Albertis; this specimen was given in exchange to the British Museum.

THOMAS, 1888, p. 280-282: *Phascologale wallacei* with *pilicauda* as synonym.

THOMAS, 1897b, p. 621: *Phascogale wallacei*.

TATE, 1947, p. 141: *Myoictis wallacei* with *pilicauda* as synonym. The Author mentions as « cotypes » Genoa Museum c.e. 3922 from Fly River, and Berlin Museum No 5680 from the same locality. The Genoa specimen was, however, already designated as lectotype by THOMAS, 1887.

LAURIE & HILL, 1954, p. 9: *Myoictis melas wallacei*.

c.e. 3922 skin and skull, ♀, pelage damaged, Fly River, approximately 8°00' S 142°00' E, Papua, 1876-'77, leg. D'Albertis. Lectotype by subsequent designation, THOMAS, 1887, p. 506, of *Phascologale (Chaetocercus) pilicauda* Peters & Doria. Until 1937 in alcohol with the measurements head and body 176, tail 140, ear 18, hind foot 32.5.

c.e. 10.461 skin, ♂, mountainous part of Vanapa River, approximately 9°05' S 147°10' E, 1894, leg. Loria. Cf. THOMAS, 1897 b, p. 621.

II - FAMILY PERAMELIDAE

6. *Peroryctes longicauda longicauda* (Peters & Doria)

PETERS & DORIA, 1876, p. 335: *Perameles longicauda* n. sp., ♀ adult, Hatam, Arfak Mts.

PETERS & DORIA, 1881, p. 672-673, col. pl. 10 (animal): *Perameles longicauda*.

THOMAS, 1888, p. 241-242: *Perameles longicaudata* (this specific name is to be regarded as a not quite justified emendation of *longicauda*). Not in British Museum. Description of the only specimen then known, in Genoa.

JENTINK, 1906, p. 203: *Perameles longicaudata*. The Author pointed to a certain inconformity in the measurements of the holotype as published by PETERS & DORIA, 1876 and 1881, and by THOMAS, 1888, respectively (cf. below).

THOMAS, 1906, p. 475-476: *Peroryctes longicaudatus*. The old genus *Perameles* was subdivided into four genera, among which *Peroryctes* n.g., type species *Perameles raffrayana* Milne-Edwards.

THOMAS, 1922b, p. 738, recorded DE BEAUX's information that the holotype showed no trace of a dorsal stripe (cf. TATE & ARCHBOLD, 1937, p. 345).

TATE, 1948b, p. 328: *Peroryctes longicauda longicauda*. Description of the holotype C.E. 3908/597. For the first time since 1876 other specimens of this (sub) species were now recorded.

LAURIE & HILL, 1954, p. 10: *Peroryctes longicauda longicauda*.

C.E. 3908 skin, 597 skull, ♀ adult, Hatam, 1°09' S 134°00' E, 1520 m, Arfak Mts, Vogelkop, VI 1875, leg. Beccari. Holotype by monotypy. JENTINK, 1906, p. 203 pointed out a certain inconformity in the measurements of the holotype as published by PETERS & DORIA, 1876 and 1881, and by THOMAS, 1888. The Museum label confirms that it was sent in loan to THOMAS and returned 1 IX 1887. The label records a third set of measurements noted by DE BEAUX VI 1937, when the specimen was removed from the alcohol, skinned and dried. I myself checked the length of tail and hind foot. The differences are to be explained partly by the mode of preservation, partly by personal methods of measuring.

Length	PETERS & DORIA	THOMAS	Label	Present Author
head and body	260	272	250 circa	—
ear	25 x 18	19	20	—
tail	185	197	179	184
hind foot	60	54	55	52

7. *Echymipera* spp.

LESSON [1827, p. 123 - 124; date from SHERBORN & WOODWARD, 1901, p. 391] described a marsupial from Waigeu I., named « kalubu » by the natives, which name he proposed as specific name, without ascribing it, for the time being, to a special genus. This caution of the Author makes, however, the name not yet available as a specific name (Code, 1961, Art. 11 g II). The only specimen was lost in a shipwreck.

LESSON, 1828, p. 200, in the chapter under the title *Perameles*, was very much inclined to consider the Waigeu animal, « nommé *kalubu* par les naturels » as belonging to this genus. The name « kalubu » was printed in italics just as all other scientific generic and specific names in this Dictionnaire, but the Author omitted the remark, made already the year before, that he reserved « kalubu » as a specific name in zoological sense. This omission makes the availability of the name at least doubtful. Nevertheless LAURIE & HILL, 1954, p. 11, combining LESSON, 1827, with LESSON, 1828, regard him as the author of the available specific name *kalubu*.

FISCHER, 1829, p. 274, referred to LESSON in the form: *Perameles* ? *Kalubu*, accompanied with a description adopted from LESSON. According to CABRERA, 1919, p. 87, and HUSSON, 1955, p. 288-290, FISCHER is formally the author of the specific name *kalubu*.

QUOY & GAIMARD, 1830, p. 100; 1833, pl. 16: *Perameles Doreyanus* n. sp., Dorey = Dorei, now Manokwari, east coast of Vogelkop, The specific name refers to the locality (« Peramèle de Dorey »), not to a Marquis Doria as LYDEKKER (1896, p. 142: « Doria's bandicoot ») thought.

LESSON, 1842, p. 192: *Echymipera* n.g., type species *Perameles kalubu* (cited from LAURIE & HILL, 1954, p. 11). From an etymological point of view the generic name is childish nonsense, something like prouckly piched mouse instead of prickly pouched mouse.

If I well understand the Code, 1961, the correct emendation *Echimypera* by CABRERA, 1919, p. 86, is thought to be unjustified. Cf. PALMER, 1904, p. 250; GRASSÉ, p. 156.

PETERS & DORIA, 1875, p. 541-542: *Perameles rufescens* n. sp., two adult ♂♂ and one juvenile, Kai Is, leg. Beccari; description with measurements. (Ibidem, p. 542 footnote): *Perameles aruensis* n. sp., Aru Is, leg. Beccari two complete skeletons of adult ♀♀, juvenile ♀ and three embryo's in alcohol in Genoa Museum. Short diagnosis. One adult ♀ had five (instead of four) upper incisors.

RAMSAY, 1877, p. 310, 378-379: *Perameles Cockerellii* n. sp., New Ireland, two specimens, description with measurements.

PETERS & DORIA, 1881, p. 670-672: *Perameles doreyanus*, in the Genoa Museum specimens from Sorong, Vogelkop, legg. Beccari, D'Albertis and Bruijn, from Korido, Supiori I. (misnamed in the paper « Misorì », cf. WICHMANN, 1909, p. 222), leg. Beccari, from Hatam, Arfak Mts, Vogelkop, leg. Bruijn, and from Katau, Papua, leg. D'Albertis. *P. rufescens*, repetition of the description from 1875. *P. aruensis*, now somewhat more extensive description with measurements and drawings (pl. 8 f. 1, pl. 9 f. 1) of the skull with 2 x 5 upper incisors seen from the lateral and dorsal side.

THOMAS, 1888, p. 229, 230, 236-239 distinguished eleven species of *Perameles* and among these two nearly related species, both with spiny fur and a short tail: *P. doreyana*, relatively large body size, muzzle long, molars triangular, their internal portion very much shorter antero-posteriorly than their external, so that (on the lingual side) broad V-shaped gaps are left between them. *P. cockerelli*, body size lesser, muzzle shorter, molars broader and more quadrangular than in *P. doreyana*, their outer sides shorter in proportion to their inner, and the internal V-shaped spaces between them therefore nearly or quite closed up. THOMAS (p. 236 footnote) refused to use « *kalubu* » as a specific name, arguing « it is impossible to determine to which of the two (just mentioned) species the name « *kalubu* » should be assigned, the type having been lost and the description being equally applicable to young specimens of either ». *P. rufescens* and *P. aruensis* are, according to THOMAS, synonyms of *P. doreyana*. The Author rejected as

superfluous the genus *Echymipera*, type species *P. doreyana* (subsequent designation by THOMAS l.c.).

THOMAS, 1906, p. 476: The Author had now changed his mind and split up *Perameles* into four genera, reviving the genus *Echymipera* Lesson, 1842, which had originally *P. kalubu* as type species, but in 1888 and now the supposed synonym of *kalubu* viz. *doreyanus* was designated as type species. It is open to discussion whether this subsequent designation of a type species was necessary and is valid under the Code, 1961. Cf. CABRERA, 1919, p. 86-87, and TATE & ARCHBOLD, 1937, p. 356. *Echymipera*, according to THOMAS, contained as second species *P. cockerelli*.

COHN, 1910, p. 722, still used the earlier nomenclature of THOMAS, 1888, and agreed with him that in *P. doreyana* the lingual side of each molar is much shorter than the buccal side, whereas in *P. cockerelli* both sides are of about equal length. COHN, however, found among the specimens he had in hands transitional forms with molars of trapezoidal outline which showed also peculiarities in their skull form, and which he called *P. doreyana alticeps* n. subsp. To cite him in his own words: « Bei *P. doreyana* ist die Innenkante der Molaren viel kürzer als der Aussenrand, so dass an der Innenseite der Zahnreihe zwischen den einzelnen Molaren, die aussen aneinander stossen, tiefe dreieckige Lücken entstehen; diese Lücken fehlen bei der innen und aussen etwa gleich breiten Molaren von *P. coquerellii* (sic; to read *cockerelli*). Nun finde ich (Cohn) aber dass bei *P. doreyana* hierin zwei Abstufungen vorkommen..... Die Zahnform ist nämlich entweder trapezoid oder fast dreieckig. Fig. 1 » TATE (1948, p. 330) referred to COHN's paper, but did not read quite the same in it as I did.

CABRERA, 1919, p. 86-87, pl. 8 f. 4: *Echimypera* Lesson emendavit CABRERA, type species *Perameles kalubu*; diagnosis and synonymy of the genus, distribution and synonymy of the species. He argued that *kalubu* FISCHER, 1829 is the valid name for *doreyanus* Q. & G.

TATE & ARCHBOLD, 1937, p. 355-359, and TATE, 1948, p. 329-334, made a careful study of specimens from different localities. Putting apart *Echymipera clara* Stein, 1932 (not represented in the Genoa collection), TATE divided the other forms of this genus into two species, one of which has triangular molars, whereas the other has molars with trapezoidal outline. He agreed with THOMAS that *ru-*

fescens and *aruensis* are available names for the species with triangular molars, and that *cockerelli* is available for the species with trapezoidal (THOMAS: « more quadrangular ») molars. TATE disagreed, however, with all earlier students of the group in his identification of the animal represented on pl. 16, QUOY & GAIMARD, 1833, with the caption « *Perameles doreyanus* ». I cite TATE, 1948, p. 330, verbally: « The pale-footed bandicoot shown on that plate, its dorsal pelage flecked with red and black and quite lacking the black frontal and crown region of the large-toothed *Echymipera*, represents, however, a very fair delineation of *Echymipera cockerelli*..... From the foregoing it becomes reasonably certain that the specific name *doreyana* should replace *cockerelli* for the trapezoidal-toothed races, while for the triangular-toothed bandicoots *rufescens* is the earliest name available. » Consequently the synonymy according to TATE, 1948b, p. 332-333, as far as important for us, runs as follows: 1. The species having molars with trapezoidal outline: *Echymipera doreyana doreyana* (Quoy & Gaimard, 1830). (TATE did not use or discuss the name *kalubu*)

Perameles doreyanus Quoy & Gaimard, 1830

Perameles cockerellii Ramsay, 1877

Perameles doreyana alticeps Cohn, 1910.

2. The species having molars with triangular outline:

Echymipera rufescens rufescens (Peters & Doria)

Perameles rufescens Peters & Doria, 1875

Perameles aruensis Peters & Doria, 1875.

TATE's revision has, of course, influenced later authors.

LAURIE & HILL, 1954, p. 11, considered *Echymipera kalubu kalubu* (Lesson, 1828) as a valid trinomen, arranging under it as synonyms *doreyanus*, *cockerelli*, and *doreyana alticeps*. The other species is *E. rufescens rufescens*, synonym *aruensis*.

HUSSON, 1955, p. 288-290, used the trinomen *Echymipera kalubu kalubu* (Fischer, 1829) explicitly for the species with trapezoidal outlines of the molar teeth, and pleaded in favour of the authority of FISCHER instead of LESSON. For the triangular-toothed species he used the name *E. rufescens rufescens*. It is remarkable that he has specimens of both species from Sorong, Vogelkop. Already TATE, 1948, p. 330, had remarked that the two species overlap. Any difference in oecology was never recorded.

The judgment of TATE who had seen so much material, is, of course, worth a careful consideration. I tried to check other specific characters in QUOY & GAIMARD's text and plate (uncolored copy in the Amsterdam University Library). Unfortunately an occlusal view of the dentition showing the outline of the molars, is not shown on the plate. Another specific character mentioned by THOMAS (1888, p. 237, 238) is this: *P. doreyana*, i^4 not markedly shorter than i^2 and i^3 . *P. cockerelli*, i^4 decidedly shorter antero-posteriorly than i^2 and i^3 , about equal to i^1 . If we compare now THOMAS, 1888, pl. 22 f. 4, engraving of the maxillary dentition of *P. cockerelli* seen from the left side, with the exact engraving of the whole skull of *P. doreyana*, seen from the same side, on the plate of QUOY & GAIMARD, we can only conclude that the latter plate figures the upper incisors of *P. doreyana* just like THOMAS described them and not the teeth of *P. cockerelli* as they are described and figured by THOMAS. As far as can be judged from the incisors, *P. doreyanus* Q. & G. is exactly identical with *P. doreyana* Q. & G. sensu THOMAS, not with *P. cockerelli* Ramsay sensu THOMAS.

Moreover I checked the body size. QUOY & GAIMARD, 1830, p. 103, recorded the total length of the animal which was an old ♂, as « 1 pied 6 pouces » = 487 mm (1 Paris foot = 0.325 m = 12 pouces = 12 x 12 lignes), length of the tail « 3 pouces 2 lignes » = 85.5 mm, which gives 402 mm for the length of head and body. That is rather well in accordance with the length of head and body of *P. doreyana* ♂ recorded by THOMAS and others. On the other hand, all recorded figures for the length of head and body of *P. cockerelli* are only 300 mm or less.

As far as these characters are concerned THOMAS' description of *P. doreyana*, therefore, fits exactly to diagnosis and plate of the animal published as *P. doreyanus* n. sp. by QUOY & GAIMARD. On the other hand this animal did not belong to *P. cockerelli* Ramsay as THOMAS (1888) described and figured it. The holotype (by monotypy) of *P. doreyanus* Q. & G. was, according to THOMAS (1888, p. 238), in the Paris Museum, and should be investigated again. It is not explicit whether THOMAS had studied this type specimen or not. In any case we should realize that *Echymipera doreyana* Q. & G. sensu THOMAS has another meaning than *Echymipera doreyana* Q. & G. sensu TATE, LAURIE & HILL, HUSSON.

On the other hand all authors agree on the specific characters of *E. cockerelli*, but they disagree on the validity on the latter specific name. In this situation I think it most useful to list the specimens of *Echymipera* in the Genoa Museum as they were classified by the older specialists, first PETERS & DORIA, later THOMAS.

A. Specimens labelled *doreyana*, det. THOMAS:

C.E. 598 skull, Sorong, Vogelkop, 0°54' S 131°15' E, 1872, leg. D'Albertis.

C.E. 10445 skin and skull, ♂, Sorong, VI 1872, leg. D'Albertis.
BECCARI, 1924, p. 97, recorded from his stay in Sorong 29 IV until 15 VII 1872: this species was abundant especially during the night.

C.E. 17653 skull, Dorei (now Manokwari) 0°52' S 134°05' E, Vogelkop.

C.E. 33958 a skin and skull, ♂ juvenile.

C.E. 33958 b skin and skull, ♀ juvenile.

Both these specimens from « North New Guinea »; Beccari's itinerary restricts the locality to Sorong, or vicinity of Dorei, or the north coast from Mamberano River eastward to Humboldt Bay. Both were preserved in alcohol until 1937 with the measurements: head and body a 163, b 155, tail a 50, b 42, ear a 16, b 17, hind foot a 34, b 34.

C.E. 3910 skin and skull, ♂, Katau, on mainland opposite Daru I., Papua, approximately 9°00' S 143°00' E, leg. D'Albertis. Until 1937 in alcohol with the measurements tail 81, ear 25, hind foot 60.

C.E. 33991 skull, Oranjerie Bay, Papua, 10°30' S 149° 40' E, XII 1872, legg. Beccari & D'Albertis, in a hut of natives.

B. Specimens labelled *cockerelli*, det. THOMAS:

C.E. 3911 skin, Korido, Supiori I. (misnamed « Misorì » cf. WICHMANN II p. 222), Geelvink Bay, 1875, leg. Beccari; until 1937 in alcohol with measurements head and body 240, tail 65, ear 19, hindfoot 46. Probably this specimen was mentioned PETERS & DORIA (1881, p. 670) in the chapter «*P. doreyanus*».

C.E. 593 skull, ♀, Haveri, Papua, 9°22' S 117°32' E, VIII IX 1893, leg. Loria.

- C.E. 34794a, skin, b skull, ♀, Haveri, Papua, leg. Loria; until 1937 in alcohol with measurements head and body 251, tail 72, ear 26, hind foot 51. (With neonatus in alcohol, not seen v.d.F.).
- C.E. 33959 skin and skull, ♂ juvenile, Bara Bara, Milne Bay, Papua, 10°20' S 150°40' E, I II 1890, leg. Loria; until 1937 in alcohol with measurements: head and body 153, tail 42, ear 17, hind foot 33.5.

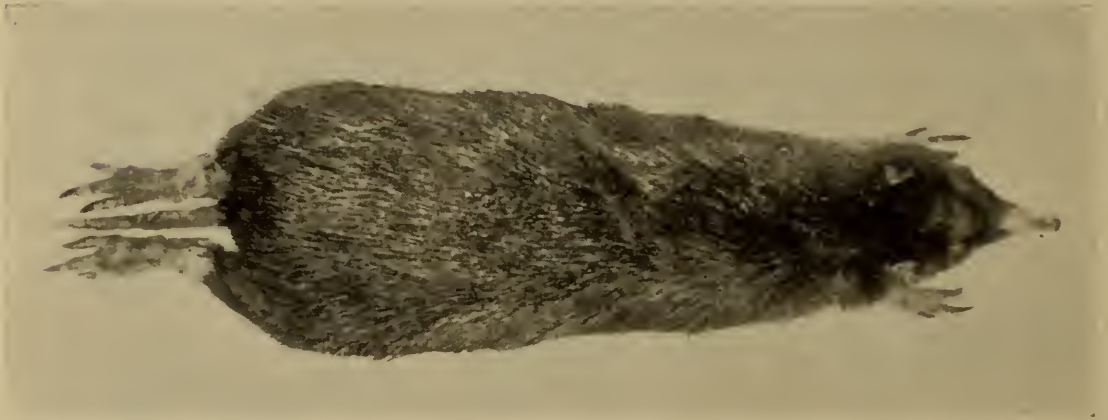


Fig. 1. - *Echymipera rufescens* (Peters & Doria) lectotype C.E. 3909.

C. Specimen labelled *Perameles* sp.:

- C.E. 3902 skin and skull, ♀, Dorei, Vogelkop, XI 1875, leg. Bruijn. Until 1937 in alcohol with measurements head and body 226, tail 52, ear 24, hind foot 41.5.

D. Specimen labelled *rufescens* Peters & Doria, *doreyana* det. THOMAS:

- C.E. 3909 skin and skull, Fig. 1-5, ♂ adult, Kai Is, 1873, leg. Beccari. Was originally a syntype from a set of two adult ♂♂ and a young; is to be regarded as the lectotype since TATE, 1948, b, p. 333, mentioned this specimen as the only type of *rufescens*. The skull shows a space between i^1 left and i^1 right, which is, according to TATE, l.c. p. 330, a distinctive character of the trapezoidal-toothed species *doreyana* sensu TATE, non THOMAS, syn. *cockerelli*; nevertheless he classifies *rufescens* in the triangular-toothed species. Fig. 3 shows that the difference between triangular and trapezoidal outlines of the molars is not absolute: a triangle with a rounded top is nearly trapezoidal. Clearly observable, however, are the triangular spaces between the molars, on the lingual side.



Fig. 2-5. - *Echymipera rufescens* (Peters & Doria) lectotype C.E. 3909.

- E. Specimen labelled *aruensis* Peters & Doria, *doreyana* det. THOMAS.
- C.E. 3973 mounted skeleton, ♀ adult, Djabulengan, west coast of Wokam I, Aru Is, 15 V 1873, leg. Beccari. Cf. PETERS & DORIA, 1875, p. 542 footnote; 1881, p. 671-672. Originally one of the two syn-types, now lectotype as designated by TATE, 1948, p. 333.
- C.E. 3970 mounted skeleton, ♀, Wokam I., Aru Is, 1873, leg. Beccari. Figured PETERS & DORIA, 1881, pl. 8 f. 1, pl. 9 f. 1 (skull). PETERS & DORIA, 1875, and 1881, remark that this individual has 2 x 5 upper incisors instead of 2 x 4 as is usual in *Echymipera*. JENTINK, 1908, p. 12, and TATE & ARCHBOLD, 1937, p. 356, discussed this fact; the latter Authors dubitated whether it really belonged to *Echymipera*. The specimen merits a renewed study.

8. *Thylacis macrourus moresbyensis* (Ramsay)

- ILLIGER, 1811, p. 76: *Thylacis* n.g., type species *Didelphis obesula*.
- DESMAREST, 1817, p. 409: *Isoodon* n.g., type species *Didelphis obesula*.
- GOULD, 1842, p. 41: *Perameles macrura* n.sp., Australia.
- RAMSAY, 1877, p. 14; 1878, p. 244; 1879, p. 88: *Perameles moresbyensis* n. sp., most probably neighbourhood of Port Moresby, Papua.
- THOMAS, 1897b, p. 621: *Perameles moresbyensis*, in Genoa Museum six specimens, Upuli, Papua, XI 1890, leg. Loria.
- THOMAS, 1906, p. 476, subdivided *Perameles* s. ampl. into four genera, among which *Isoodon* Desmarest, type species *Perameles obesula*, and containing moreover the species *macrourus*, *moresbyensis*, and two other ones.
- TATE, 1948b, p. 340: *Isoodon macrourus moresbyensis*.
- LAURIE & HILL, 1954, p. 12: *Thylacis macrourus moresbyensis*.
- C.E. 33940 skin and skull, ♂ young adult, Upuli, Papua, XI 1890, leg. Loria.
- C.E. 33941a skin and skull, ♀ adult, Upuli, Papua, XI 1890, leg. Loria.
- C.E. 33941b skin and skull, ♀ juvenile, Upuli, Papua, XI 1890, leg. Loria.

These specimens were preserved in alcohol until 1937 with the following measurements:

	33940	33941 a	33941 b
head and body	250	262	134
tail	113	124	70
ear	25	30	19
hind foot	55	54	34

I could not find the locality Upuli on any map, not even on the scale 4 miles to 1 inch. THOMAS (1897, p. 607), indicated Kapa Kapa 9°50' S 147°30' E, and Upuli a little further east, both on the sea coast. To read: a little further south or southeast.

III - FAMILY PHALANGERIDAE

Several authors used, instead of the valid generic name *Phalanger* STORR, 1780, one of its younger synonyms *Phalangista*, *Coescoes* or *Cuscus*. I did not cite binomina as synonyms if the specific name is valid. The sequence of the species is based on TATE, 1945.

9. *Phalanger orientalis* cf. *ornatus* (Gray)

GRAY, 1860, p. 374; pl. 74: *Cuscus ornatus* n. sp., Batchian I.

THOMAS, 1888, p. 205-206: *Phalanger ornatus*.

TATE, 1945a, p. 10-11: *Phalanger orientalis ornatus*.

LAURIE & HILL, 1954, p. 13: *Phalanger orientalis ornatus*.

C.E. 10315 skin, 10315 A skull, ♀ adult, Halmaheira I.; VII 1875, leg. Bruijn.

TATE, 1945, p. 10-11 gives short remarks on the colour of the pelage and on the incisors of this specimen.

C.E. 1526 stuffed skin, 1527 skull, ♀, Halmaheira, I., VII 1875, leg. Beccari.

C.E. 1528 stuffed skin, 1529 skull, ♂, Ternate, XI 1874, leg. Beccari; det. THOMAS.

C.E. 1530 stuffed skin, 1531 skull, ♀, Ternate, IX 1874, leg. Bruijn.

C.E. 1532 stuffed skin, 1533 skull, ♂, Ternate, XI 1874, leg. Beccari.

C.E. 1544 stuffed skin, ♀, Ternate, II 1875, leg. Bruijn.

C.E. 3815 stuffed skin, 3816 skull, ♀ adult, Ternate, XI 1874, leg. Bec-cari.

C.E. 1534 stuffed, skin, 1535 skull, ♀, Tidore I., IX 1874, leg. Bruijn.

C.E. 10316 skin, 10317 skull, ♀ adult, Obi Majoor I., V 1875, leg. Bruijn.

The above subspecies is rather clearly distinguishable. On the labels of the following specimens no subspecies is mentioned. I arranged them according to the localities.

10. *Phalanger orientalis* (Pallas)

PALLAS, 1766, p. 62: *Didelphis orientalis* n. sp., Amboina.

A. From Amboina and Kai Islands.

C.E. 554 stuffed skin, 555 skull, ♀ juvenile, Amboina, bought from G.A. Frank, Amsterdam (a merchant house dealing in animals living and dead).

C.E. 10314 skin, 10314 A skull, ♂ adult, Amboina, XII 1874, leg. Bec-cari.

C.E. 1540 stuffed skin, 1541 skull, ♀ juvenile, Kai Is.

C.E. 3967, 3968, 3969 three mounted skeletons, Banda, Gran Kai I., VII 1873, leg. Beccari. Cf. PETERS & DORIA, 1881, p. 681: brown with dark dorsal line.

B. From Vogelkop and islands in the Geelvink Bay (cf. PETERS & DORIA, 1881, p. 682).

C.E. 5402 skin, 5402 A skull, ♂ juvenile, Andai, Vogelkop, 0°51'S 134°01'E, leg. D'Albertis; until 1937 in alcohol with the measurements head and body 239 circa, tail 209, ear 20, hind foot 39.

C.E. 1538 stuffed skin, 1539 skull, ♂ juvenile, Ansoes I., off south coast of Japen I.

C.E. 1536 stuffed skin, 1537 skull, ♀ juvenile, Korido, Soepiori I. (mis-named « Misorì », cf. WICHMANN II p. 222).

C.E. 1542 stuffed skin (not seen), 1543 skull, ♀, Korido, 1875, leg. Bec-cari.

C. From Papua (Fly River eastward to Milne Bay).

C.E. 5401 skin, 5401 A skull, ♀, Fly R. approximately 8°00' S 142°00' E, or somewhat higher on the River, (1875-'77), leg D'Albertis.

- C.E. 33982 skull, Port Moresby, 9°30' S 147°10' E, 1875-'77, leg. D'Albertis.
- C.E. 34789 A skin, B skull, ♂ juvenile, Gerekanumu, Astrolabe Range, 9°31' S 147°22' E, II 1893, leg. Loria. Until 1937 in alcohol with the measurements head and body 205, tail 173, ear 18, hind foot 36. Big, outstanding ears, naked at the outside, arose my doubts about the determination and reminded me of *Ph. gymnotis*.
- C.E. 33945 skin, 33946 skull, ♂ juvenile, Gerekanumu, Astrolabe Range, II 1893, leg. Loria; until 1937 in alcohol with the measurements head and body 232, tail 211, ear 19, hind foot 40.
- C.E. 33947 skin, 33948 skull, ♂ adult, Haveri, 700 m, 9°22' S 147°32' E, VIII/XI 1893, leg. Loria.
- C.E. 10451 skin (rest of the body nr. 66 non C.E., not seen), ♂, Aroma, 10°08' S 147°59' E, IX 1889, leg. Loria.
- C.E. 33942 skin, ♀, the same locality, date and collector.
- C.E. 33983, 33984, 33985 three skulls, damaged and apparently smoke-dried, from a house of the natives, Orangerie Bay, 10°30' S 149°40' E, according to label: XII 1872, legg. Beccari & D'Albertis, from itineraries more probable: I 1873, leg. D'Albertis.
- C.E. 33986, 33987, 33988, 33989 four skulls, as before, Papua, without exact locality, legg. (Beccari?) and D'Albertis (Cf. WICHMANN for D'Albertis' manner of collecting ethnological objects.).
- C.E. 33943 skin, 33944 skull, ♀, Bara Bara, Milne Bay, 10°20' S 150°40' E, I/II 1890, leg. Loria; until 1937 in alcohol with the measurements head and body 290, tail 265, ear 13, hind foot 40.
- C.E. 10452 skin (rest of the body nr. 70 non C.E. not seen), ♂, Papua, leg. Loria.
- C.E. 10453 skin (rest of the body nr. 71 non C.E. not seen), ♀, Papua, leg. Loria.
- C.E. 3817 mounted skin, 3818 skull, ♂, Papua.

11. *Phalanger gymnotis* (Peters & Doria)

PETERS & DORIA, 1875, p. 543: *Phalangista (Cuscus) gymnotis* n. sp., only one adult ♂, Djabulenga (in the Italian text BECCARI, 1924, p. 213 spelled Giabu-lengan; misspelled: LAURIE & HILL, 1954, p. 16 « Gialnhengan », in the gazetteer p. 145 « Gialnhagen »),

village on the west coast of Wokam I., Aru Is, leg. Beccari, who noted the acquisition in his diary 5 V 1873 (BECCARI, 1924, p. 219). Description with measurements. The collector had communicated that the animal, according to the natives, is less arboreal in its habits than the other phalangers. (On the biotope and habits cf. SCHWARZ, 1934, p. 88, and TATE, 1945, p. 15).

PETERS & DORIA, 1881, p. 679-680, pl. 8 f. 3 skull left side, pl. 9 f. 3 skull dorsal side, coloured pl. 14 animal: *Phalangista* (*Cuscus*) *gymnotis*. Description with measurements.

JENTINK, 1885, p. 97: «*Phalangista* (*Cuscus*) *gymnotis* is a perfectly adult male of *Cuscus orientalis* as the figures of the animal and of its skull and the description prove. All the differences summed up by the authors are of a mere individual value and we have skulls of *Cuscus orientalis* (adult specimens) from different localities agreeing exactly with the skull of *Cuscus gymnotis* ». (Cf. however JENTINK, 1911a and b; obviously in 1885 he had not yet seen the holotype in Genoa).

THOMAS, 1888, p. 201, mentioned the specific name *gymnotis* under the synonyms of *Phalanger orientalis*, without any comment.

JENTINK, 1911a, p. 233-234: *Phalanger gymnotis*. Describing three phalangers from the mainland of New Guinea (Lorentz expedition 1909-1910) the Author remarks: «The type-specimen and at the same time the only known individual (of *Phalanger gymnotis*), has been a puzzle to all students of the *Phalanger*-group. It therefore is of the highest interest that I (Jentink) found in the Lorentz-collection the three above mentioned specimens, prima facie distinct from all hitherto seen individuals of the *orientalis*-group, but at the same time exactly agreeing with *gymnotis*. I (Jentink) could study the type in the Genoa Museum, so that I am absolutely sure of the identification... Extremely striking is the kind of fur and its colour as well as the naked tail, only adorned with a rather small ring of fur round its base; moreover the skull, concave like in *orientalis*, presents a dentition quite distinct from that of the latter species, especially by the very stout posterior premolar (p⁴) in the upper as well as in the lower jaw, placed by far not so correctly in the molar row as is the case in all other *Phalanger*-species ».

JENTINK, 1911b, p. 177-178, repeats the above communication adding measurements and some details.

SCHWARZ, 1934, p. 87-91: *Phalanger gymnotis*. Under this name the Author records two specimens in the British Museum, collected 1933 in Kobroor I., Aru Is, without describing them extensively. According to the collector, Mr Wilfred Frost, the animals lived



Fig. 6. - *Phalanger gymnotis* (Peters & Doria) holotype C.E. 1545.

in caves and were well known to the natives as a species distinct from *P. orientalis*. Probably the Author had not seen the holotype in Genoa, but he remarked that his specimens agreed exactly with the type of *Phalanger leucippus* THOMAS, 1898, which name therefore, would be a junior synonym of *P. gymnotis*. (I will discuss this synonymy below under 12 *P. vestitus*).

TATE & ARCHBOLD, 1937, p. 368: « Whatever the inter-relationships of *gymnotis* and *leucippus*, together they constitute a definite and well-marked section of the *orientalis*-group ».

TATE, 1945a, p. 15-16: *Phalanger gymnotis* with *P. leucippus* as junior synonym. The Author had at his disposal 25 specimens from different localities between sea level and 7000 feet high. He had now studied the holotype of *gymnotis* in Genoa and described it: « Of general size of *leucippus* but the pelage appearing shorter

(5-7 mm.). Ears not concealed. The customary heavy scaling is seen in the tail as in *leucippus*. In the skull, great expansion of the zygomata and extreme enlargement of p^4 , coupled with its outward displacement and rotation, are noteworthy ».

LAURIE & HILL, 1954, p. 16: *Phalanger gymnotis*, synonym *leucippus*. C.E. 1545 stuffed skin, 3966 mounted skeleton, ♂, « Giabu Lengan » (see above), 5 V 1873, leg. Beccari. Holotype, Fig. 6.

Provisionally I might refer to this species the two following specimens about which the former curator de Beaux left some remarks in handwriting on the underside of the pedestal of the stuffed skins; he had in mind to found a subspecies *orientalis ambiguus* (unavailable manuscript name!) on them, but emphasized at the same time the affinity to *gymnotis*.

C.E. 1525 stuffed skin, ♂ adult, Sorong, Vogelkop, 12 II 1875, leg. Beccari.

C.E. 3817 stuffed skin, 3818 skull, ♂, Papua, leg. D'Albertis.

12. *Phalanger vestitus* (Milne-Edwards)

MILNE-EDWARDS, 1877, p. 1080: *Cuscus vestitus* n. sp., Karoon district, south side of Tamrau Mts, Vogelkop, approximately 0°50' S 132°30' E. TATE, 1945, p. 16,35, description and measurements of the holotype.

JENTINK, 1885, p. 94, 97: *Cuscus vestitus*, junior synonym of *Cuscus orientalis*.

THOMAS, 1888, p. 202: *Cuscus vestitus*, junior synonym of *Phalanger orientalis* var. *typicus*.

THOMAS, 1898, p. 5-6: *Phalanger carmelitae* n. sp., « mountainous part of the Vanapa R., Papua, leg. Loria, three specimens; measurements of an adult ♂.

TATE, 1945a, p. 16-17, 35: *Phalanger vestitus* with subspecies *carmelitae*. The species belongs to the *orientalis* group and contains the « silky phalangers » living in the mountains of New Guinea. The Author records to have seen « the type and four (sic) paratypes of *carmelitae*, all collected by Loria in 1894 on the upper Vanapa River, which rises on the slopes of Mount Scratchley and Victoria, and numbered as follows: the type, Genoa C.E. 10455; the paratypes, Genoa C.E. 10456-10457 and B.M. No. 97.8.7.87 ».

LAURIE & HILL, 1954, p. 16: *Phalanger vestitus* with *P. charmelitae* as synonym.

C.E. 10455 skin, 10455 A skull, ♀ adult, mountainous part of the River Vanapa, Papua, approximately 9°05' S 147°10' E, 1894, leg. Loria. Basal parts of skull lacking, teeth preserved. *Phalanger carmelitae* det. THOMAS. Designated as lectotype by TATE, 1945, p. 17.

C.E. 10456 skin and skull, adult ♂, locality, date, collector, and determinavit as before. Paralectotype.



Fig. 7. - *Phalanger leucippus* Thomas syntype C.E. 10454.

C.E. 10457 skin and skull (base damaged), ♀ juvenile, locality, date, collector and determinavit as before. Paralectotype.

All three just mentioned specimens are covered with long soft hairs, nearly 20 mm long. Ears concealed in the pelage, outside haired, inside not.

C.E. 3894 skin and skull, ♀?, juvenile, locality, date and collector unknown, belongs in my opinion to the same species. Perhaps the fourth « paratype » to which TATE alluded.

13. *Phalanger leucippus* Thomas

THOMAS, 1898, p. 7-8: *Phalanger leucippus* n. sp., mountainous part of Vanapa River, Papua, 1894, leg. Loria. Three specimens, one of which in British Museum, the two others in Genoa Museum. Measurements of old ♂. « This species seems to be most nearly allied to *Ph. gymnotis*. » Dentition and pelage of both species are compared.

TATE, 1945a, p. 15: « The cotypes of *P. leucippus* are marked « type », one at Genoa, C.E. 10454, the other at London, B.M. No. 97.8.7.88. Both are adult males », (Where is the third syntype? v.d.F.) « Length of the pelage 13-17 mm. ...*Phalanger gymnotis* and *P. leucippus* have long been considered conspecific. Study of the type skulls and of a further extensive series of specimens confirms this view ». Pelage of the type of *P. gymnotis* 5-7 mm.

LAURIE & HILL, 1954, p. 16: *Phalanger leucippus* as a synonym of *P. gymnotis* (cf. LAURIE, 1952, p. 287-288).

C.E. 10454 skin and skull, mountainous part of Vanapa River, Papua, 1894, leg. Loria. *Phalanger leucippus* det. THOMAS, labelled « Typus ». Fig. 7-11.

C.E. 33990 skull, Papua, leg. D'Albertis. (If the name of the collector is correct, this specimen did not belong to the original lot on which THOMAS based *P. leucippus*)

Because I had no opportunity to compare both existing syntypes (in Genoa and London) with THOMAS' original description, I refrain from designating a lectotype. Notwithstanding the similarity of the skulls of *P. leucippus* and *P. gymnotis*, I am not convinced of their synonymy. *P. leucippus* has the short ears concealed in the long pelage, just like *P. vestitus* (and *carmelitae* from just the same locality on the Vanapa River). *P. gymnotis* has long outstanding ears and short pelage. Judged by the skin, *P. vestitus*, synonym *carmelitae*, and *P. leucippus* both are mountain living forms with long silky hair; *P. gymnotis* is a short haired form from another biotope.

14. *Phalanger celebensis* cf. *sangirensis* Meyer

GRAY, 1858, p. 105 (not pl. 62): *Cuscus celebensis* n. sp., Makassar, Celebes.

JENTINK, 1885, p. 104-107: *Cuscus celebensis*.

THOMAS, 1888, p. 206-208: *Phalanger celebensis*.

MEYER, 1896, p. 34, pl. 15 f. 2, 3: *Phalanger sangirensis* n. sp., Sanghir Is.

TATE, 1945, p. 17-18: *Phalanger celebensis sangirensis*.

LAURIE & HILL, 1954, p. 16: *Phalanger celebensis sangirensis*.



Fig. 8-9. - *Phalanger leucippus* Thomas, syntype C.E. 10454.

C.E. 10318 skin, 10319 skull, ♂ adult, Sanghir Petta I. (off the most northern point of Celebes); *celebensis* det. THOMAS; *ornatus* det. DE BEAUX.

15. *Phalanger maculatus* (Desmarest)

DESMAREST, 1818, p. 472: *Phalangista maculata* (based on an unavailable paper of E. GEOFFROY, 1803; cf. LAURIE & HILL, 1954, p. 14).

PETERS & DORIA, 1881, p. 681-682: *Phalangista (Cuscus) maculata*; short descriptions of thirteen colour varieties from different localities, represented in the Genoa Museum.

JENTINK, 1885, p. 107-118: *Cuscus maculatus*.

THOMAS, 1888, p. 197-200: *Phalanger maculatus*.

TATE, 1945a, p. 18-27: *Phalanger maculatus* (Geoffroy, 1803).

LAURIE & HILL, 1954, p. 14-15: *Phalanger maculatus* (Desmarest).

I arranged the specimens according to their localities, without trying to distinguish subspecies.

A. From Kai and Aru Is.

C.E. 1512 stuffed skin, 1513 skull, ♂ juvenile, Banda, Gran Kai I., VII 1873, leg. Beccari.

C.E. 1519 stuffed skin, ♀, Wokam I.

C.E. 1523 stuffed skin, 1524 skull, Maikoor I., 4 V 1873, leg. Beccari.

C.E. 10312 skin, ♂ adult, Wangal, village of Wamar I., 29 VII 1873, leg. Bruijn.

C.E. 604 skull, ♂, Aru Is, leg. Beccari.

(C.E. 1522 stuffed skin, ♂, juvenile, Aru Is, VI 1873, leg. Beccari; given in exchange to Museum in Milan V 1958).

B. From Waigeu I.

C.E. 1508 stuffed skin, 1509 skull, ♀, Waigeu I., VI 1875, leg. Bruijn.

C.E. 1510 stuffed skin, 1511 skull, ♂, Waigeu, 9 VI 1875, leg. Bruijn.

C. From Vogelkop.

C.E. 552 stuffed skin, 553 skull, ♀, Sorong, 12 II 1875, leg. Beccari.

C.E. 1502 stuffed skin, 1503 skull, ♂ adult, Sorong, V 1872, leg. Beccari.

C.E. 1506 stuffed skin, 1507 skull, ♀, Sorong, 1875, leg. Beccari.

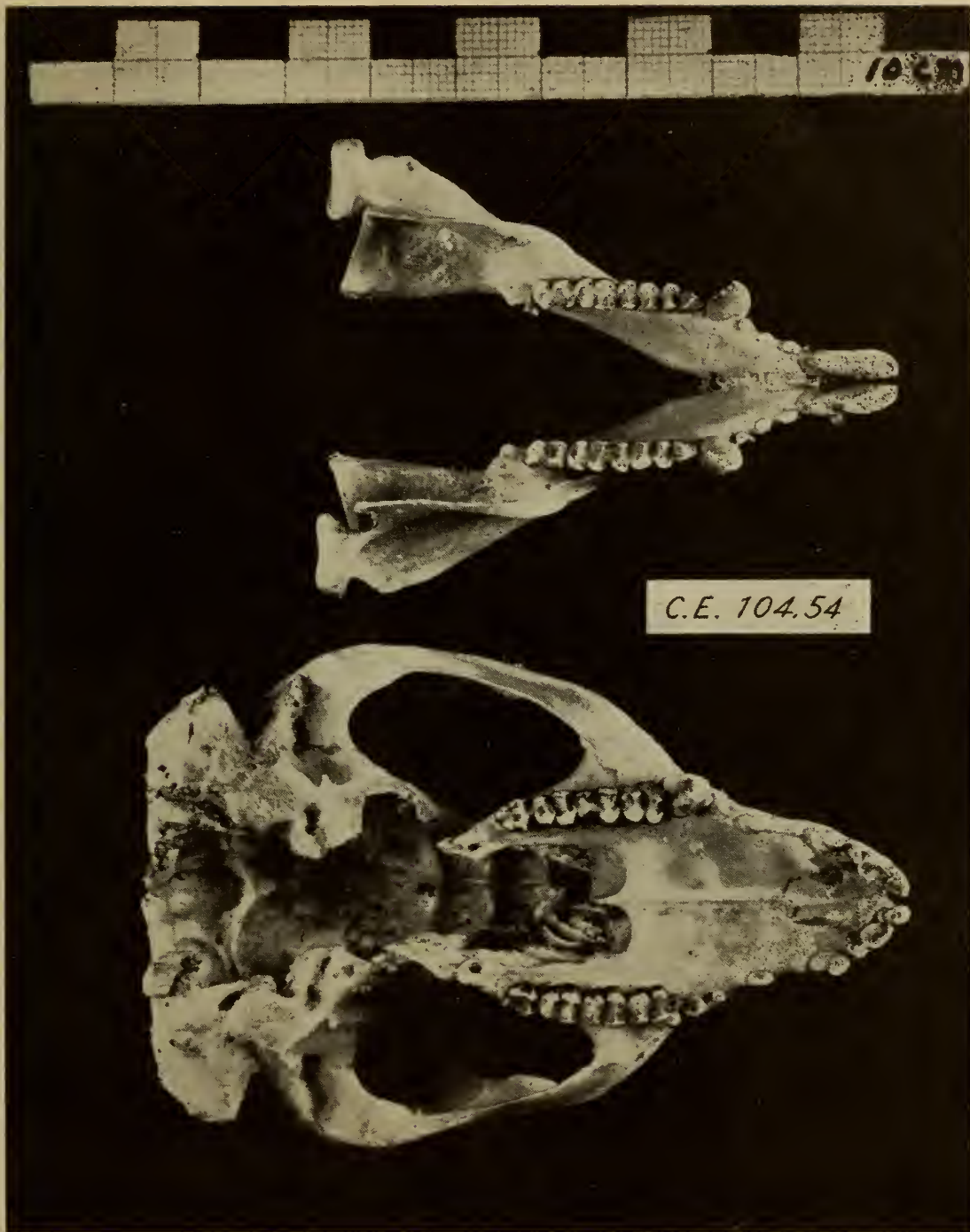


Fig. 10-11. - *Phalanger leucippus* Thomas syntype C.E. 10454.

C.E. 1504 stuffed skin, 1505 skull, ♂, Warbusi, 24 III 1875, leg. Beccari. (Warbusi is a village a little S of Momi, on the east coast of Vogelkop. Beccari stayed here 23-III-2 IV 1875, cf. BECCARI, 1924, with map.).

D. From islands in the Geelvink Bay.

- C.E. 1514 stuffed skin, 1515 skull, ♀ juvenile, Biak I., V 1875, leg. Beccari.
- C.E. 10313 skin (damaged), 10313 A skull, ♀, Mafoor I. = Noemfor I., 1874 leg. Bruijn.
- C.E. 1520 stuffed skin, 1521 skull, ♀, Mios Noem I., 4 V 1875, leg. Beccari.
- C.E. 1516 stuffed skin, 1626 skull, ♀ juvenile, daughter of C.E. 1520, Mios Noem I., 4 V 1875, leg. Beccari.
- C.E. 1517 stuffed skin, 1518 skull, ♀, Ansoes I. off south coast of Japen I., 22 IV 1875, leg. Beccari.

E. From Papua (Fly River eastward to Aroma, approximately 1° eastward from Port Moresby).

- C.E. 5400 skin, 5400 A skull, ♀ juvenile, Fly R., approximately 8°00' S 142°00' E, or somewhat higher on the River, leg. D'Albertis.
- C.E. 5399 skin and skull, ♀ juvenile, Port Moresby, leg. D'Albertis. Until 1937 in alcohol with the measurements head and body 370, tail 390, ear 29, hind foot 50.
- C.E. 3896 skin and skull, ♀ juvenile, Gerekanumu, 500 m, on the southern slope of the Astrolabe Range, 9°31' S 147°22' E, I 1893, leg. Loria. Until 1937 in alcohol with the measurements head and body 278, tail 250, ear 18, hind foot 16.
- C.E. 10450 skin, ♀ adult, Aroma, 10°08' S 147°59' E, IX 1889, leg. Loria.
- C.E. 34790 skin and skull, ♀ juvenile, Papua, leg. D'Albertis. Until 1937 in alcohol with the measurements head and body 205, tail 175, ear 14, hind foot 34.
- C.E. 33566, 33567, 33568 three skulls, Papua, leg. D'Albertis.

16. **Phalanger ursinus** (Temminck)

- TEMMINCK, 1824, p. 10-12, pl. 1 f. 1-3 (skull), pl. 2 f. 1-5 (skull), pl. 4 (skeleton): *Phalangiſta ursina*, northern part of Celebes.
- JENTINK, 1885, p. 118-119: *Cuscus ursinus*.
- THOMAS, 1888, p. 195-195: *Phalanger ursinus*.
- TATE, 1945a, p. 27-29: *Phalanger ursinus*.

LAURIE & HILL, 1954, p. 16-17: *Phalanger ursinus*.

C.E. 1493 stuffed skin, ♂, Kendari, southeastern peninsula of Celebes, III 1874, leg. Beccari.

C.E. 1500, stuffed skin, 1501 skull, ♂, locality, date and collector as before.

C.E. 3965, mounted skeleton, ♀, Kendari, IV 1874, leg. Beccari.

C.E. 33565 skull, ♀, Kendari, III 1874, leg. Beccari.

17. *Dactylopsila trivirgata* Gray

GRAY, 1858, p. 109-111, pl. 63: *Dactylopsila trivirgata* n. g. n. sp., Aru Is.

PETERS & DORIA, 1875, p. 542: *Dactylopsila Albertisii* n. sp., only one ♀ adult, Vogelkop, west coast near Sorong, leg. D'Albertis. Holotype by monotypy C.E. 3905.

PETERS & DORIA, 1881, p. 673-674: *Phalangista* (*Dactylopsila*) *trivirgata*; p. 674: *Phalangista* (*Dactylopsila*) *angustivittis*, new name for *Ph. (D.) Albertisii*, because the latter name eventually could be confounded with *Phalangista (Pseudochirus) Albertisii* Peters, 1874.

THOMAS, 1888, p. 160-162: *Dactylopsila trivirgata* with *albertisi-angustivittis* as synonyms. The Author « cannot look upon it (= the holotype of the latter names) as representing more than an individual, or at most a slight local variation ».

JENTINK, 1908, p. 12, and TATE & ARCHBOLD, 1937, p. 391, emphasized the large variability in the pattern of the skin. Many subspecies have been based on it, but are not generally accepted.

LAURIE & HILL, 1954, p. 17-18: *Dactylopsila trivirgata* with two or three subspecies.

A. From Aru Is, Waigeu I., and Vogelkop:

C.E. 14437 A skin and skull, ♂ adult, Wokam I., Aru Is, 1873, leg. Beccari. Until 1937 in alcohol with the measurements head and body 250, tail 262, ear 26, hind foot 37.

PETERS & DORIA, 1881, p. 673 mention ♀ adult, Waigeu I., leg. Bruijn, in the Genoa Museum. I have not seen this specimen.

C.E. 3905 skin and skull, ♀ adult, Vogelkop near Sorong, leg. D'Albertis. Until 1937 in alcohol with the measurements head and body

223 circa, tail 310, ear 24, hind foot 40. Holotype by monotypy of the species *albertisii* Peters & Doria, 1875 and *angustivittis* (Peters & Doria, 1881).

The late curator dr. DE BEAUX noted in C.E. that a ♂ adult from Hatam, Arfak Mts, east side of Vogelkop, VI 1875, leg. Beccari, mentioned PETERS & DORIA, 1881, p. 673, was missing already when TATE revised the collection in May 1937.

B. From Papua (Fly River eastward to Milne Bay):

C.E. 14437 B skin and skull, ♀ juvenile, River Katau, approximately 9°00' S 143°00' E, on the mainland west of Daru I., 1876, leg. D'Albertis. (The late curator dr. DE BEAUX noted in C.E. that a ♂ juvenile from the same locality was sent in exchange to the British Museum 2 II 1922.)

C.E. 3906 A skin and skull, ♂, Fly River, approximately 8°00' S 142°00' E, leg. D'Albertis. Until 1937 in alcohol with the measurements head and body 190, tail 245, ear 26, hind foot 40.

C.E. 3906 B skin and skull, ♀, the same locality, date and collector. Until 1937 in alcohol with the measurements head and body 245, tail 239, ear 27, hind foot 42.

C.E. 1619, mounted skin, ♂, Yule, I., 8°50' S 146°30' E, 1875, leg. D'Albertis.

C.E. 10462 skin, juvenile, mountainous part of Vanapa River, approximately 9°05' S 147°10' E, 1894, leg. Loria.

C.E. 1620 mounted skin, 1621 skull, ♀, Gerekanumu, 9°31' S 147°22' E, 1893, leg. Loria.

C.E. 14438 B skin, ♂ juvenile, Haveri 700 m, 9°22' S 147°32' E, 1893, leg. Loria.

C.E. 14438 A skin, ♂ adult, Bara Bara, 10°20' S 150°40' E, village on the coast of Milne Bay, opposite Killerton I., 1890-1893, leg. Loria. Until 1937 in alcohol with the measurements head and body 260 circa, tail 335, ear 26, hind foot 39.

18. *Petaurus breviceps* Waterhouse

PETERS & DORIA, 1881, p. 683: *Petaurus Ariel* (Gould).

For synonymy and subspecies see THOMAS, 1888, p. 156-159, TATE, 1945 b, p. 6-10, LAURIE and HILL, 1954, p. 18-19. Judging

from the localities several subspecies, remaining unmentioned on the labels, may be represented in the Genoa collection.

A. From Kai Is and Halmahera group (LAURIE & HILL, l.c., do not mention the Kai Is among the ranges of one of the subspecies, and in the Halmahera group only Batchian I.).

C.E. 1566, 1567, 1568 mounted skins, Kai Is, 1875, leg. Beccari.

C.E. 5404 skin and skull, juvenile, Gran Kai I., VIII 1873, leg. Beccari.

C.E. 34285 and 34286 skins and skulls, ♂, ♀, and ♂ juvenile, Kai Is, 1875, leg. Beccari.

C.E. 5403 skin and skull, ♀, Halmahera, XII 1874, leg. Bruijn.

C.E. 1564, 1565 mounted skins, Ternate, 1875, leg. Beccari.

B. From Salawati I. and islands in the Geelvink Bay:

C.E. 1627 mounted skin, Salawati I., 1875, leg. Beccari.

C.E. 34284a, b, c, three skins and skulls, all ♀, Salawati I., 31 VIII 1875, leg. Beccari.

C.E. 1569, 1570, 1571 mounted skins, Supiori I. (misnamed Misori, cf. WICHMANN, II, p. 222), 1875, leg. Beccari.

C.E. 34283 skin and skull, ♂, Korido, Supiori I., 1875, leg. Beccari.

C.E. 34289 skull, Korido, Supiori I., V 1875, leg. Beccari.

C.E. 1562, 1563 mounted skins, Japen I.

C. From Papua:

C.E. 34280a and b and skulls, ♂ adult and ♂ juvenile, Haveri, 700 m, 9°22' S 147°32' E, 1893, leg. Loria.

C.E. 34272, 34275, 34276 several skins and skulls, about six adult ♂♂, eleven ♀♀, 15 juveniles, Hula, Pt Hood, 10°05' S 147°45' E, VIII 1889, leg. Loria.

C.E. 34279 skin and skull, Aroma, 10°08' S 147°59' E, X 1889, leg. Loria.

Unnumbered, four juveniles, Bara Bara, 10°20' S 150°40' E, opposite Killerton I., Milne Bay, I/II 1890, leg. Loria.

C.E. 3971 skeleton, ♀, Papua (no exact locality), leg. Loria.

19. *Distoechurus pennatus* (Peters)

PETERS, 1874, p. 303: *Phalangista* (*Distoechurus*) *pennata* n. subg. n. sp., Andai (? cf. below), Vogelkop.

PETERS & DORIA, 1881, p. 677-679; pl. 6 f. 5-10 skull, palate, coloured pl. 13 animal: *Phalangista* (*Distoechurus*) *pennata*. Description. Arboreal habits.

THOMAS, 1888, p. 139-140: *Distoechurus pennatus*, mentions « co-types in the Berlin and Genoa Museums ». Measurements of the latter (♀).

LAURIE & HILL, 1954, p. 20: *Distoechurus pennatus*.

C.E. 3899 skin and skull, ♀, (a foetus in alcohol, same number, not seen), Hatam, Arfak Mts, Vogelkop, 1872, legg. Beccari & D'Albertis. Holotype by monotypy. Until 1937 in alcohol with the measurements head and body 101, tail 123, ear 8, hind foot 18.

C.E. 3898 skin and skull, ♂, Gerekanumu, 9°31' S 147°22' E, on the southwestern slope of the Astrolabe Range, Papua, II 1892, leg. Loria. Until 1937 in alcohol with the measurements head and body 105 circa, tail 133, ear 9, hind foot 19.

There is some uncertainty concerning the type locality. The museum label has: « Hatam Mti Arfak ». BECCARI recorded 20-VI-1875 that Hatam is situated 1520 m above sea level, and we found it on a map, WICHMANN II p. 157, about 1° S 134° E. According to the publication, PETERS, 1874, and also PETERS & DORIA, 1881, the type locality is Andai, situated at sea level on the coast of the Dorei Bay, 0°51' S 134°00' E, a little south of Manokwari. I tried to find other evidence in the books of BECCARI and D'ALBERTIS. Together they had their headquarters in Andai from 6 VIII until 6 XI 1872. From there they visited the Arfak Mts independently. D'Albertis made his mountain excursion 4-29 IX, Beccari 28 IX - 9 X. D'ALBERTIS recorded (p. 126) 27 IX « The natives... have brought me... a few mammiferous animals. Among them I may mention a beautiful new species of cuscus, which is much esteemed by the natives for its flesh. The top of the tail is used to make earrings ». Cf. ibidem p. 125 uncoloured engraving of *Phalangista pennata* and BECCARI, 1924, p. 161, fig. 24 such an earring from the same district. PETERS & DORIA, 1881, recorded the Genoa Museum contained then (1881) only two specimens; one of them

was brought by D'Albertis and was found between the branches of a big tree felled by the men of Beccari (the botanist!), who later on (cf. below: 1875) found another individual at the same spot.

In 1875, arriving again in Vogelkop, BECCARI noted (translation v.d.F.): During all the time that D'Albertis accompanied me, I had to suit his wish that I only had to occupy me with botany. Now Beccari was glad he could collect animals also. 27 XI 1875 (p. 411) he recorded: We are returned in Andai. I have collected *Phalangista pinnata*. From this record we may conclude two things. PETERS dating his publication Berlin 12 VIII 1874, had not yet seen this second specimen, which is, therefore, not a syn-type in the sense of the Code. I did not find this specimen in the Genoa Museum. I suppose it is the « co-type in the Berlin Museum » to which THOMAS, 1888, refers. In any case we may take it for granted that the species occurred in Andai at sea level and not only between 2,000 and 6,000 feet, as LAURIE & HILL restricted the range of *D. p. pennatus*.

20. *Pseudocheirus forbesi* Thomas

On the spelling of the generic name, subgenera, and the synonymy cf. TATE, 1945, p. 1, LAURIE & HILL, 1954, p. 20-23.

THOMAS, 1887a, p. 146: *Pseudochirus forbesi* n. sp., Sogeri, 9°26' S 147°29' E, 500 m, Papua (locality cited from Laurie & Hill), holotype in British Museum.

THOMAS, 1888, p. 183-184, col. pl. 1 (animal), pl. 20 f. 1-3 (skull): *Pseudochirus forbesi*.

THOMAS, 1897b, p. 620: *Pseudochirus forbesi*, coll. Loria, in Genoa Museum.

TATE, 1945b, p. 11: *Pseudocheirus forbesi*, with subspecies.

LAURIE & HILL, 1954, p. 21: *Pseudocheirus forbesi*, with subspecies.

C.E. 33950 skin and skull, ♂, Moroka, 1300 m, 9°25' S 147°41' E, « among the mountains behind the Astrolabe Range, near Mt Wori-Wori » (THOMAS, 1897b, p. 607; cf. WICHMANN II, p. 402 map), Papua, VII 1893, leg. Loria, det. THOMAS. Until 1937 in alcohol with the measurements head and body 244, tail 220, ear 17, hind foot 30.

- C.E. 33951 skin and skull, ♀, Gerekanumu, 9°31' S 147°22' E, on the southern slope of the Astrolabe Range (Cf. THOMAS, 1897b, p. 607), Papua, II 1893, leg. Loria, det. THOMAS. Until 1937 in alcohol with the measurements head and body 243, tail 196, ear 14, hind foot 21. (Three foetus in alcohol, not seen.) Both specimens and the holotype are from the same district, mountainous country between the Central Range and the sea, Papua.

21. *Pseudocheirus canescens* (Waterhouse)

- WATERHOUSE, 1846, p. 306: *Phalangista (Pseudochirus) canescens*, Triton Bay, south coast of Netherlands New Guinea.
- SCHLEGEL, 1866, p. 357: *Phalangista Bernsteinii* n. sp., Salawati I.
- PETERS & DORIA, 1881, p. 676-677, col. pl. 12 (animal): *Phalangista (Pseudochirus) Bernsteinii*; in the Genoa Museum one specimen (cf. below C.E. 3895) from Ramoi. The Authors emphasized the similarity with *Ph. canescens*.
- THOMAS, 1888, p. 181-183: *Pseudochirus canescens* with *Phalangista bernsteini* as junior synonym. The Genoa specimen mentioned.
- TATE, 1945b, p. 14: *Pseudocheirus canescens bernsteinii*.
- LAURIE & HILL, 1954, p. 22: *Pseudocheirus canescens bernsteini*.
- C.E. 3895 skin and skull, ♀, Ramoi, west coast of Vogelkop, south of Sorong, 1872, leg. D'Albertis. (Two foetus in alcohol mentioned on label, not seen.) Described and figured PETERS & DORIA, 1881, under the name *Phalangista (Pseudochirus) Bernsteinii*. Mentioned THOMAS, 1888, as *Pseudochirus canescens*. Until 1937 in alcohol, with the measurements: head and body circa 245, tail 202, ear 15, hind foot 32. The type locality of *Ps. canescens bernsteini*, Salawati I. is opposite Ramoi, and the specimen could belong to this subspecies, which was not checked.

22. *Pseudocheirus albertisii* (Peters)

- PETERS, 1874, p. 303: *Phalangista (Pseudochirus) Albertisii*, n. sp. Hatam, leg. D'Albertis. Short diagnosis.
- PETERS & DORIA, 1881, p. 674-676, pl. 8 f. 2, pl. 9 f. 2 (skull), col. pl. 11 (animal). More extensive description. Recorded that were sent

to the Genoa Museum: one specimen from Hatam, Arfak Mts, leg. D'Albertis (1872, cf. C.E. 3897), another from the same locality, leg. Beccari (1875, cf. C.E. 1546, 1547), and Bruijn's hunters had killed ♂ and ♀, again at the same locality (cf. C.E. 1548, 1549, and THOMAS, 1888, p. 180, specimen a and b).

THOMAS, 1888, p. 178-180, pl. 17 f. 8 (tail), pl. 20 f. 1 (skull): *Pseudocheirus albertisi*. Measurements of the « type in the Museo Civico, Genoa » in alcohol. The measurements of the skull, p. 185, however, are of specimen a in the British Museum.

BECCARI, 1924, p. 382-385, gives information on the localities: Hatam, 1520 m above sea level in the Arfak Mts, Vogelkop.

Profi (or Prafi, THOMAS l.c.; cf. WICHMANN II, p. 157 map: Hatam, Prafi, Mori).

TATE, 1945 b, p. 21-22, 29: *Pseudocheirus* (*Pseudochirops*) *albertisii*, with synonyms. In the table of measurements C.E. 1547 and 3897 are both marked « cotype ». From the date of collecting (VI 1875) it is, however, obvious that PETERS cannot have seen C.E. 1546 when he described his new species « Berlin 12 VII 1874 ».

LAURIE & HILL, 1954, p. 22: *Pseudocheirus albertisi* (Peters).

C.E. 3897 skin and skull, ♂, Hatam, Arfak Mts, Vogelkop, VII 1872, leg. D'Albertis. Holotype by monotypy.

C.E. 1546 mounted skin, 1547 skull, ♂, River Profi, Arfak Mts, 17 VI 1875, leg. Beccari.

C.E. 1548 mounted skin, 1549 skull, ♀, Arfak Mts, 1 V 1875, legg. hunters sent by Bruijn.

23. *Pseudocheirus corinnae* Thomas

THOMAS, 1897 a, p. 142-144: *Pseudochirus corinnae* n. sp., mountainous part of River Vanapa, Papua, leg. Loria. Description of skin and skull, measurements. « Cotypes, two males, precisely similar to each other, in the Genoa and British Museums ». There was still another skin (and skull). Named in memory of the collector's deceased sister.

THOMAS, 1897 b, p. 619-620, col. pl. 2 (animal): *Pseudochirus corinnae*. Repeats the description from 1897 a. .

TATE, 1945, p. 20, 27: *Pseudocheirus* (*Pseudochirops*) *corinnae*, with subspecies. In the table of measurements (p. 27) the specimen

Genoa C.E. 10458 (skin) with 17630 (skull) is designated as « type » (lectotype, Code 1961), C.E. 10459 as paratype (original designation), B.M. 97.8.7.86 as « cotype » (paralectotype, Code 1961).

LAURIE & HILL, 1954, p. 22-23: *Pseudocheirus corinnae*, with subspecies.

C.E. 10458 skin, 17630 skull, ♂ (THOMAS, 1897 a p. 143; probably ♀ TATE, 1945, p. 20), mountainous part of River Vanapa, approximately 9°05' S 147°10' E, Papua, Originally one of the two syntypes. Lectotype by designation TATE, 1945, p. 27.

C.E. 10459 skin, 10459 A skull, ♂, locality and collector as above. Paratype.

IV - FAMILY MACROPODIDAE

24. *Dorcopsulus macleayi* (Miklouho-Maclay)

MIKLOUHO-MACLAY, 1885, p. 145-150, pl. 20 f. 5-9 (skull and neck): *Dorcopsis macleayi* n. sp., near Port Moresby, Papua. The species was named in honour of Sir William John Macleay, 1820-1891, founder of the Linnean Society of New South Wales; cf. the Macleay Memorial Volume edited 1893 by this Society. The Author NIKOLAJ MIKLOUHO-MACLAY, 1846 (Ucraina, Russia) - 16 IV 1888 (St Petersburg), was a geographer, ethnologist and zoologist, who travelled in New Guinea; cf. WICHMANN, and BECCARI, 1924, p. 271-272.

THOMAS, 1888, p. 92: *Dorcopsis macleayi*.

THOMAS, 1897 b, p. 618: *Dorcopsis macleayi*. Loria had collected in Papua a skin in spirit from Haveri (cf. below C.E. 1596), and two skins from the mountainous part of the River Vanapa (cf. below C.E. 10449; the other was presented to the British Museum, cf. l.c. p. 607).

MATSCHIE, 1916, p. 57: *Dorcopsulus* n. subg., type species *Dorcopsis macleayi*.

TATE & ARCHBOLD, 1937, p. 418 f. 12 (skull, palatal view; not natural size, as the caption says), p. 419, p. 473-474 (measurements): *Dorcopsis* (*Dorcopsulus*) *macleayi*.

TATE, 1948 a, p. 287: *Dorcopsulus macleayi*.

LAURIE & HILL, 1954, p. 23: *Dorcopsulus macleayi*.

- C.E. 10449 skin and skull, ♂, mountainous part of River Vanapa, 9°05' S 147°10' E, 1874, leg. Loria. Cf. THOMAS, 1897 b, p. 618; TATE, 1948 a, p. 287: « virtual a topotype ».
- C.E. 33980 skin or skull ?, ♀, locality unknown, 1875, leg. D'Albertis (not seen).
- C.E. 1596 stuffed skin, 1597 skull are puzzling and require a careful consideration. The stuffed skin bears no original handwritten label, as most other do, but on the wooden pedestal is a printed label: « *Dorcopsis luctuosa* D'Albertis. Nuova Guinea merid. L.M. D'Albertis 1876 C.E. 1596 ». On the underside of the pedestal is a handwritten note: « *Dorcopsis luctuosa* D'Alb. O.T. » which I understand as determinavit O. THOMAS. C.E. adds a locality: Mt Epa (cf. below sub species 25 b). In handwriting on the brain-case: « *Dorcopsis luctuosus* », which cannot be the handwriting of THOMAS, who used to write *D. luctuosa*. Both skin and skull, however, show the characters of *Dorcopsulus*, not of *Dorcopsis* (Cf. the synonymy sub 25 b). In other words, identifying the skull with the aid of THOMAS, 1888, it falls certainly under *Dorcopsis macleayi*, and not under *D. luctuosus*. Another puzzling specimen is the stuffed skin 1598 (with 1599 skull) bearing a handwritten label « Viaggio di Lamberto Loria Nuova Guinea Britannica, Haveri 700 m Ag. Nov. 93 *Dorcopsis macleayi* Mikl. Macl. (teste THOMAS) ». On the underside of the wooden pedestal is a label « *Macropus bruijnii* fide G.H.H. TATE 1937 ». I agree with the latter identification. In both cases to my mind it is unacceptable that THOMAS, who knew those species very well, had misidentified the specimens. Moreover *Thylogale* (or *Macropus*) *brunii* seems to be living in grassy plains and its occurrence in Haveri, 9°22' S 147°32' E, among the mountains behind Port Moresby, is not to be expected. A specimen of *Dorcopsis macleayi*, collected by Loria, was reported by THOMAS, 1897 b, p. 618, and I may suggest that during the technical process of stuffing and mounting the original label of *macleayi* (now C.E. 1596) from Haveri was fixed to *brunii* (now 1598) which had lost its original label. The notes in C.E. do not help us because both specimens are booked as « pelle montata » (stuffed skin), obviously after they had undergone the technical process.

25 A. *Dorcopsis veterum* (Lesson)

PETERS & DORIA, 1881, p. 25-26: *Dorcopsis Mülleri*.

THOMAS, 1888, p. 87-89: *Dorcopsis mülleri*.

TATE, 1948 a, p. 289: *Dorcopsis mülleri*.

LAURIE & HILL, 1954, p. 24: *Dorcopsis mülleri*.

HUSSON, 1955, p. 296-300: *Dorcopsis veterum*.

For the complete synonymy see the two latter publications. In the Genoa Museum the name *Dorcopsis muelleri* is in use on the labels.

C.E. 10474 skin and skull, ♂, Salawati I., 1875, leg. Bruijn.

C.E. 10476 skin, 10477 skull, ♀ adult, Salawati I., VI 1875, leg. Bruijn (most probably the collector's handwriting on the oldest label).

C.E. 10475 skin and skull, ♀ juvenile, Salawati I., VII 1875, leg. Bruijn.

C.E. 1594 mounted skin (not seen), 3958 mounted skeleton, ♂ adult, Sorong, west coast Vogelkop, 21 VI 1872, legg. Beccari & D'Albertis.

C.E. 3959 mounted skeleton, Ramoi, south of Sorong, Vogelkop, V 1872, legg. Beccari & D'Albertis, from the stomach of a snake *Liasis papuanus* Peters & Doria, cf. BECCARI, 1924, p. 87.

25 B. *Dorcopsis luctuosa* (D'Albertis)

D'ALBERTIS, 1874, p. 110: *Halmaturus luctuosus* n. sp., Papua, only one ♀.

SCLATER, 1874, p. 247, col. pl. 42 (animal): *Halmaturus luctuosus*.

GARROD, 1875, p. 48-59, pl. 7 (skull), pl. 8 (head), pl. 9 (teeth): *Dorcopsis luctuosa*.

D'ALBERTIS, 1880, I. p. 270, 31 III 1875, on the coast of the mainland opposite Yule I., 8°50' S 146°30' E, northwest of Port Moresby, Papua «Tomasinelli shot a small kangaroo, the male *Dorcopsis luctuosus*, of which in Europe the female only is known, and furnishes the type of the species. In this animal I observed two canine teeth, which do not exist in the female». Ibidem p. 295, 21 IV 1875, in the same region: «At dusk several other men and women arrived in the village, on their return from hunting the kangaroo or barai (*Dorcopsis luctuosus*) of which they had killed

twenty. They use long nets in hunting this animal, with which they surround its haunts, and when it is entangled in the nets they kill it with clubs.» Animal figured opposite p. 295.

PETERS & DORIA, 1881, p. 686: *Dorcopsis luctuosus*. D'Albertis collected some specimens for the Genoa Museum at Epa (cf. below).

THOMAS, 1888, p. 89-91: *Dorcopsis luctuosa*.

TATE & ARCHBOLD, 1937, p. 418 f. 12 (skull, palatal view, not natural size as the caption says), p. 473 (measurements): *Dorcopsis (Dorcopsis) luctuosa*.

TATE, 1948a, p. 289: *Dorcopsis mülleri mülleri* with *luctuosus* as junior synonym.

LAURIE & HILL, 1954, p. 24: *Dorcopsis muelleri* with *luctuosus* as junior synonym.

C.E. 1595 stuffed skin, Epa, 8°45' S 146°45' E, village inland opposite Yule I., Papua, IV 1875, leg. D'Albertis.

C.E. 3978, 3980, 3981 skulls, ♂, Epa, Papua, 2 5 IV 1875, leg. D'Albertis.

C.E. 3977, 3979 skulls, ♀, locality, date and collector as before.

C.E. 33978, 33979 skulls, without exact locality or date, but in any case collected by D'Albertis in Papua.

C.E. 1596, 1597 see sub 24.

26. *Dendrolagus dorianus* Ramsay

RAMSAY, 1883, p. 17: *Dendrolagus dorianus* n. sp., mountains behind Mt Astrolabe, Papua.

MIKLOUHO-MACLAY, 1885, pl. 71 f. 2 (animal) f. 3-4 (incisors).

THOMAS, 1888, p. 98-99: *Dendrolagus dorianus*.

ROTHSCHILD & DOLLMAN, 1936, p. 488-490: *Dendrolagus dorianus*.

TATE, 1948 a, p. 294: *Dendrolagus dorianus dorianus*.

LAURIE & HILL, 1954, p. 25-26: *Dendrolagus dorianus dorianus* and other subspecies.

C.E. 1600 skin, 1601 skull, ♂, juvenile, mountainous part of Vanapa River, approximately 9°05' S 147°10' E (not far from the type locality!), Papua, 1894, leg. Loria. Cf. THOMAS, 1897 b, p. 618; TATE, 1948 a p. 294.

27. *Dendrolagus inustus* Müller

MÜLLER, 1840, p. 20 footnote; figured 1841, pl. 20-24: *Dendrolagus inustus*. The same locality as the following species.

PETERS & DORIA, 1881, p. 687: *Dendrolagus inustus*.

THOMAS, 1888, p. 95-96: *Dendrolagus inustus*.

TATE, 1948 a, p. 290, 293: « It is necessary to state at once my (TATE's) unproved suspicion that *Dendrolagus ursinus* and *D. inustus* are not distinct species but color phases of a single species.» Therefore *inustus* a junior synonym of *ursinus*.

LAURIE & HILL, 1954, p. 26-27: *Dendrolagus inustus* with subspecies.

HUSSON, 1955, p. 301-303: *Dendrolagus inustus inustus* (contra TATE l.c.).

C.E. 3826: stuffed skin, 3963 mounted skeleton, ♀, Sorong, west coast Vogelkop, 20 V 1872, leg. D'Albertis. Cf. PETERS & DORIA, 1881, p. 687; BECCARI, 1924, p. 96-97 (on habits and domestication).

C.E. 746 stuffed skin, 747 skull, ♂, Dorei (now Manokwari), east coast Vogelkop, 1876, leg. Beccari. Cf. PETERS & DORIA, 1881, p. 687.

C.E. 3982 skull (posterior part lacking), juvenile, Arfak Mts, 1°09' S 134°00' E, Vogelkop, VI 1874, leg. Bruijn (label in his handwriting).

C.E. 3825 stuffed skin, ♀ adult, locality unknown (New Guinea), leg. D'Albertis.

28. *Dendrolagus ursinus* (Temminck)

TEMMINCK, 1836, p. VI: *Hypsiprimnus ursinus*, n. sp., neighbourhood of Mt Lamantsjieri, 3°42' S 134°09' E, near Triton Bay, south coast Netherlands New Guinea (cited from HUSSON, 1955, p. 302; 1958, p. 10).

MÜLLER, 1840, p. 20; figured 1841 col. pl. 19 (animal), pl. 22 (head), pl. 23,24 (skull and legs).

PETERS & DORIA, 1881, p. 686: *Dendrolagus ursinus*. The Genoa Museum then possessed two specimens collected in the Arfak Mts by Bruijn's hunters (now only one).

THOMAS, 1888, p. 94-95: *Dendrolagus ursinus*.

ROTHSCHILD & DOLLMAN, 1936, p. 493-495, col. pl. 43: *Dendrolagus ursinus*.

TATE, 1948 a, p. 293-294: *Dendrolagus ursinus*, with subspecies.

LAURIE & HILL, 1954, p. 27: *Dendrolagus ursinus*, with subspecies.

HUSSON, 1955, p. 302; 1958, p. 9-13: *Dendrolagus ursinus* Temminck.



Fig. 12. - *Protomnodon agilis papuanus* (Peters & Doria) holotype C.E. 1580.

C.E. 1602 stuffed skin, 1603 skull, ♀, Arfak Mts, 1°09' S 134°00' E, east side Vogelkop, VI 1874, leg. Bruijn. Cf. PETERS & DORIA, 1881, p. 686; TATE, 1948 a, p. 294.

29. *Protomnodon agilis papuanus* (Peters & Doria)

PETERS & DORIA, 1875, p. 544: *Macropus papuanus* n. sp., mainland opposite Yule I., near Hall Sound, Papua. Diagnosis and measurements.

PETERS & DORIA, 1881, p. 683-685, col. pl. 15 (animal), pl. 16 (skull): *Macropus papuanus*. Ample description and comparison, now not only based on the juvenile ♀ holotype, but also on two larger specimens from River Katau, Papua, collected by D'Albertis.

THOMAS, 1888, p. 42-44: *Macropus agilis*, living in Australia and New Guinea, with *M. papuanus* as synonym. « Papuan specimens appear to be somewhat smaller, and to have longer fur and better-defined markings than their North-Australian representatives; but these characters are not sufficiently well marked to separate the two forms specifically ».

THOMAS, 1897 b, p. 618: *Macropus agilis*. Specimens collected by Loria.

TATE & ARCHBOLD, 1937, p. 410-411: *Macropus (Protemnodon) agilis papuanus*.

TATE, 1948 a, p. 302: *Macropus agilis papuanus*, type: Genoa C.E. 1580, 1581.

LAURIE & HILL, 1954, p. 27: *Protemnodon agilis papuanus*.

HUSSON, 1958, p. 245-252, pl. 7 (biotope), pl. 8, 9, 12 (skull), pl. 10, 11 (animal): *Protemnodon agilis papuanus*.

(N.B. All specimens in the collection are from Papua, localities from W to E.)

C.E. 1580 stuffed skin, 1581 skull, ♀ juvenile, mainland opposite Yule I., northwest of Port Moresby, 1875, leg. D'Albertis. Holotype by monotypy. Figured PETERS & DORIA, 1881. TATE, 1948 a, p. 302, notes that only p^3 , dp^4 and m^1 are in place. Fig. 12-16.

C.E. 10439 skin, ♂, Katau River, approximately 9°00' S 143°00' E, in mainland west of Daru I., X 1876, leg. D'Albertis.

C.E. 33973 skull, Katau, X 1876, leg. D'Albertis.

C.E. 33965 skull, ♂ adult, Fly River, approximately 8°00' S 142°00' E, 1875-'77, leg. D'Albertis.

C.E. 33965 bis skull, Port Moresby, 1875-'77, leg. D'Albertis.

C.E. 33972 skull (other parts of skeleton in depot, not seen), Rigo, 9°50' S 147°35' E (inland village near Kapa Kapa), 1888-'97, leg. Loria.

C.E. 34796 a skin, 34796 b skull, ♀ juvenile, Aroma, 10° 08' S 147°59' E, IX 1889, leg. Loria. Until 1937 in alcohol, with the measurements: head and body 317, tail 269, ear 40, hind foot 117.

C.E. 33964 skull, Orangerie Bay, 10°30' S 149°40' E, X 1872, legg. Beccari & D'Albertis, from a house of natives.



Fig. 13-14. - *Proteomnodon agilis papuanus* (Peters & Doria) holotype C.E. 1581.

- C.E. 34705 a skin, 34705 b skull, ♀ juvenile, Waikunina (village on the Kemp Welch River), VI 1890, leg. Loria. Cf. THOMAS, 1897 b, p. 618, SALVADORI, 1891, p. 798. Until 1937 in alcohol, with the measurements: head and body 284, tail 242, ear 41, hind foot 113.
- C.E. 33966 - 33971 six skulls, Papua, 1877, leg. D'Albertis.
- C.E. 741 stuffed skin, 742 skull, ♂ adult, Papua (no exact locality), leg. Loria.

30. *Thylogale brunii* cf. *brunii* (Schreber)

- SCHREBER, 1778, pl. 153: *Didelphys Brunii*, based on an animal in captivity; type locality restricted to Aru Is., by SCHLEGEL, 1866.
- SCHLEGEL, 1866 b, p. 350-353: *Dorcopsis Brunii*. Restricted the type locality to Aru Is.
- PETERS & DORIA, 1881, p. 685: *Macropus Brunii*.
- THOMAS, 1888, p. 49-51: *Macropus brunii*.
- TATE & ARCHBOLD, 1937, p. 414-415: *Macropus (Thylogale) brunii*.
- TATE, 1948 a, p. 317: *Thylogale brunii brunii*.
- LAURIE & HILL, 1954, p. 28: *Thylogale bruijni bruijni*.
- HUSSON, 1955 b; p. 297: *Thylogale brunii*.
- HUSSON, 1958 b, p. 249: *Thylogale brunii brunii*.
- A. TATE, 1948 a, p. 317, regards the following specimens from the Aru Is. as typical *brunii*:
- C.E. 1575 stuffed skin, 1576 skull, ♂ adult, Wokam I., Aru Is, 14 III 1873, leg. Beccari.
- C.E. 1574 stuffed skin, 3961 mounted skeleton, ♂ juvenile, locality, date and collector as before.
- C.E. 10479 skin and skull, ♀ juvenile, IV 1873, the same locality and collector.
- C.E. 10478 skin, ♀ adult, locality, date and collector as before.
- C.E. 1578 stuffed skin, 1579 skull, ♀ juvenile, Djabulengan, Wangal I., Aru Is, V 1873, leg. Beccari.

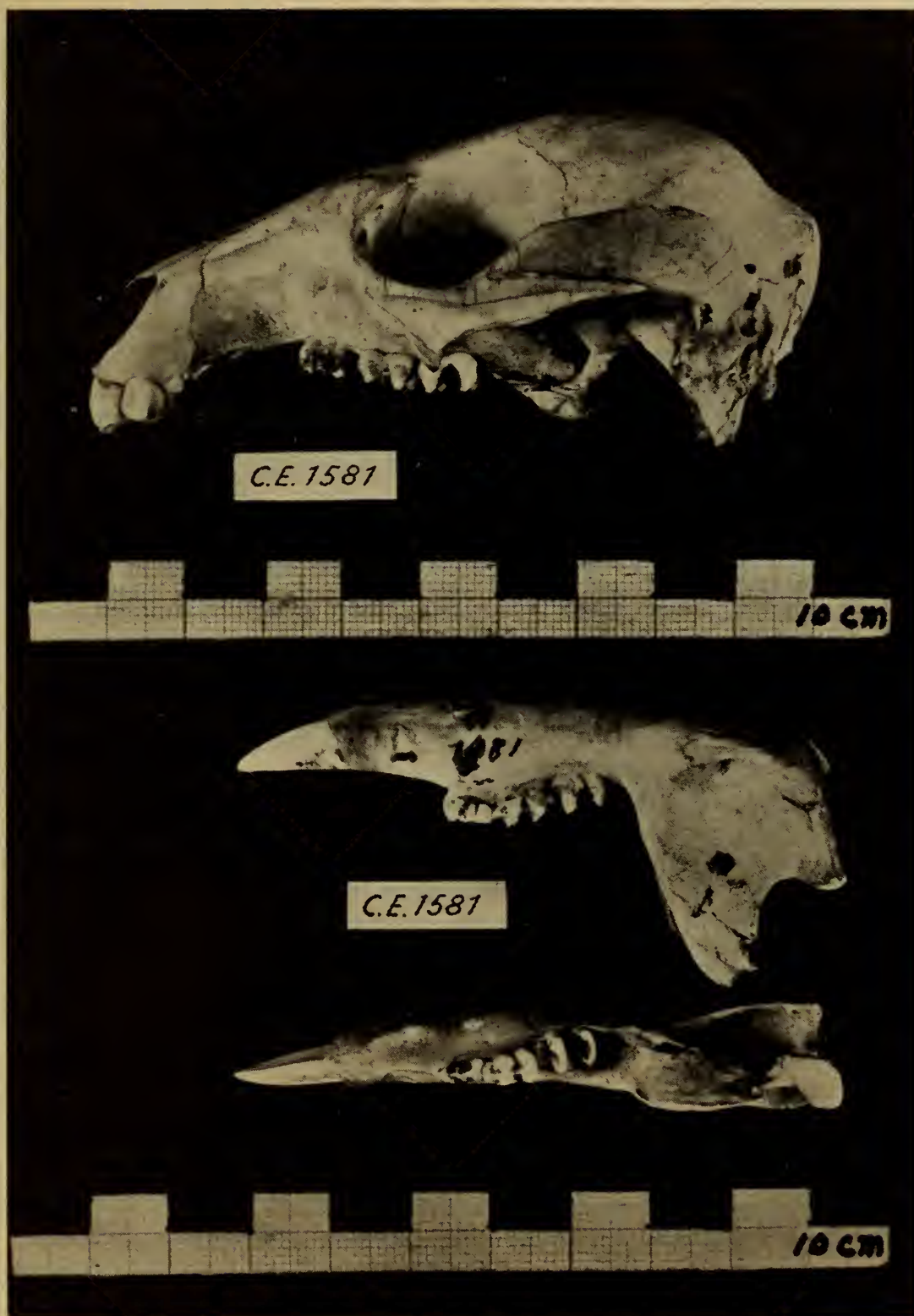


Fig. 15-16. - *Protemnodon agilis papuanus* (Peters & Doria) holotype C.E. 1581.

B. From Kai Is:

C.E. 1577 stuffed skin, 3960 mounted skeleton, ♀ juvenile, Bandan, Gran Kai, 3 VIII 1873. Cf. TATE l.c. p. 317-318.

C. From Papua:

C.E. 33977 skull, ♂ adult, Fly River, approximately 8°00' S 142°00' E, leg. D'Albertis; with label *Th. brownii* (Ramsay).

C.E. 33974 and 33976 two skulls, ♂ adult; 33975 skull, ♀ adult, Papua, leg. D'Albertis 1875-'77, exact locality unknown, with label *Th. brownii* (Ramsay).

C.E. 1598 stuffed skin, 1599 skull, locality uncertain, see sub 24.

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All the photos were made by mr. Aldo Margiocco (Genoa).

MAX FISCHER

Naturhist. Museum - Wien

DIE *OPIINAE* DES MUSEO CIVICO DI STORIA NATURALE IN GENUA

(*Hymenoptera*, *Braconidae*)

Im Frühjahr des Jahres 1961 hatte ich Gelegenheit, nach Genua zu reisen und die Hymenopteren-Sammlung des Museo Civico di Storia Naturale zu besichtigen. Dank des Entgegenkommens des Direktors des Institutes, Herrn Prof. Dr. E. Tortonese, und vor allem der unermüdlichen Hilfe der Kustodin der entomologischen Sammlungen, Frau Dr. Delfa Guiglia, war es mir möglich, das gesamte Braconiden-Material zu sichten und zu ordnen. Beiden möchte ich an dieser Stelle meinen verbindlichsten Dank ausdrücken.

So konnte ich auch die *Opiinae* aus dem Material herausziehen und bearbeiten. Es handelte sich zwar nur um eine kleine Anzahl von Exemplaren, doch konnten immerhin 9 Arten aus zwei verschiedenen Regionen neu beschrieben werden, nämlich 3 aus der neotropischen und 6 aus der orientalischen Region. Sie verteilen sich auf 2 Gattungen, u. zw. *Pectenopius* Fi. (1 Art) und *Opius* Wesm. (8 Arten). Ausserdem konnte das bisher unbekannte Männchen von *Opius walkeri* Mues. festgestellt werden. Auch diese Art wurde beschrieben. Endlich wurden die Typen von zwei weiteren Arten überprüft: *Giardinaia urinator* de Stef. und *Diachasma rimulosa* Marsh. *Giardinaia urinator* gehört eindeutig zum Genus *Ademon* Hal. und wird im folgenden ebenfalls beschrieben. *Diachasma rimulosa* ist hingegen überhaupt keine Opiine und somit aus der Liste der *Opius*-Arten zu streichen. Die Art ist am ehesten zum Genus *Pelecystoma* Wesm. zu stellen. Zum Schluss wird ein Verzeichnis der determinierten paläarktischen Arten gegeben. Diesen wenigen Exemplaren kommt deshalb besondere Bedeutung zu, weil die meisten dort angegeben Fundorte für die Verbreitung der betreffenden Arten neu sind.

Zur Bezeichnung des Flügelgeäders wurden die gleichen Abkürzungen verwendet, wie in den anderen Arbeiten des Autors über *Opiinae*

(siehe Ann. Mus. Civ. Stor. Nat. Genova 70, 1958, p. 52, Fig. 16). Um die absoluten Längen der Körperteile in Millimetern zu erhalten, sind die relativen Grössen mit 0,033 zu multiplizieren.

Genus **Pectenopius** Fi.

Pectenopius Fischer, Ann. Naturhist. Mus. Wien, 64, 1961, p. 156.

Bis jetzt wurden die folgenden beiden Arten dieser Gattung festgestellt:

1. r1 nicht länger als cuq1, r3 achtmal so lang wie r2; Flügel gleichmässig, schwach getrübt; erstes Tergit kaum länger als hinten breit; zweites und die folgenden fein und gleichmässig punktiert. Neu Guinea *paradoxus* Fi.
- r2 doppelt so lang wie cuq1, r3 doppelt so lang wie r2; Flügeln an den Rändern der äusseren Adern mit braunen Wolken; erstes Tergit um drei Viertel länger als hinten breit; zweites längsgestreift, die übrigen glatt. Sumatra. *sumatranus* n. sp.

Pectenopius paradoxus Fi.

Pectenopius paradoxus Fischer, Ann. Naturhist. Mus. Wien, 64, 1961, p. 156, ♀ ♂.

Pectenopius sumatranus n. sp. (Abb. 1)

♀. - Kopf: Doppelt so breit wie lang, grob und irregulär runzelig, Augen vorstehend, hinter den Augen verengt, Schläfen halb so lang wie die Augen, Hinterhaupt schwach gebuchtet; Ocellen vortretend oval, der Abstand zwischen ihnen kleiner als ein Ocellusdurchmesser, der Abstand des äusseren Ocellus vom inneren Augenrand um die Hälfte grösser als die Breite des Ocellarfeldes. Gesicht um die Hälfte breiter als hoch, grob runzelig, matt, kaum gewölbt, fein und hell behaart, diese Behaarung aber nur von der Seite zu sehen; Mittelkiel nur oben ausgebildet; Augenränder in der Nähe der Fühlerbasis schwach ausgebuchtet; Clypeus durch einen schwachen Eindruck vom Gesicht getrennt, grob und dicht punktiert, vorne schwach eingezogen, in gleicher Ebene wie das Gesicht liegend, recht breit und kurz. Wangen etwas kürzer als die basale Mandibelbreite. Mund offen, Mandibeln an der Basis nicht erweitert, Maxillartaster kürzer als die Kopfhöhe, fünfgliedrig, das vorletzte Glied ist kürzer als die anderen, letztere ungefähr

gleich lang. Fühler borstenförmig, die Fühlergeissel gegen die Spitze zu gleichmässig schmaler werdend, so lang wie der Körper, 37gliedrig; alle Geisselglieder etwa doppelt so lang wie breit, eng aneinander-schliessend und spärlich behaart.

Thorax: Um zwei Drittel länger als hoch, um ein Drittel höher als der Kopf und etwas schmaler als dieser; Prothorax nach vorne deutlich verlängert, Metathorax mit dem Propodeum nach rückwärts vorgezogen; Oberseite gewölbt, Unterseite gerade. Mesonotum um ein Drittel breiter als lang, vor den Tegulae gerundet, grob runzelig, matt, dicht und gelblich, nach rückwärts anliegend behaart; Notauli und Rückengrübchen fehlen, Seiten überall fein gerandet. Praescutellarfurche krenuliert. Scutellum punktiert und behaart, etwas glänzend. Postscutellum krenuliert. Propodeum eng und gleichmässig, maschenartig runzelig, matt, fein behaart. Prothorax runzelig, Seite des Prothorax gestreift. Mesopleurum grob, maschenartig runzelig, Sternaulus nicht eingedrückt, hintere Randfurche krenuliert. Metapleurum runzelig, vordere Furche gekerbt. Beine vom Typus der Gattung; alle Schenkel verdickt, Hinterschenkel dreimal so lang wie breit, hinterer Basitarsus so lang wie die übrigen Tarsenglieder zusammen, Klauen gekämmt; an den Vorder- und Mitteltarsen nur das letzte Glied verlängert, dieses so lang wie die anderen Tarsenglieder zusammen, die letzteren sehr kurz.

Flügel: Hyalin, die Ränder von r2, r3, cuqu2, cu2 und cu3 mehr oder weniger von braunen Wolken gesäumt. Ziemlich schmal. Stigma breit, eiförmig, r entspringt fast aus der Mitte, r1 länger als die Stigmabreite, einen stumpfen Winkel mit r2 bildend, r2 gut doppelt so lang wie cuqu1, r3 fast gerade, doppelt so lang wie r2, R reicht fast an die Flügelspitze, n. rec. stark antefurkal, der Abschnitt von cu zwischen n. rec. und cuqu1 länger als cuqu1, Cu2 nach aussen erweitert, cuqu2 länger als cuqu1, d dreimal so lang wie n. rec., Nervulus fast um die doppelte eigene Länge postfurkal, B aussen unten offen, d geht im Bogen in n. par. über; das Geäder des Hinterflügels ist ähnlich dem von *P. paradoxus* Fi.

Abdomen: Erstes Tergit um drei Viertel länger als hinten breit, nach vorne fast gleichmässig, geradlinig verengt, die Tuberkeln in der Mitte der Seitenränder nur schwach ausgebildet; nur an der äussersten Basis mit winkelig zusammenlaufenden Kielen; das ganze Tergit kräftig und ziemlich regelmässig längsgestreift. Zweites Tergit